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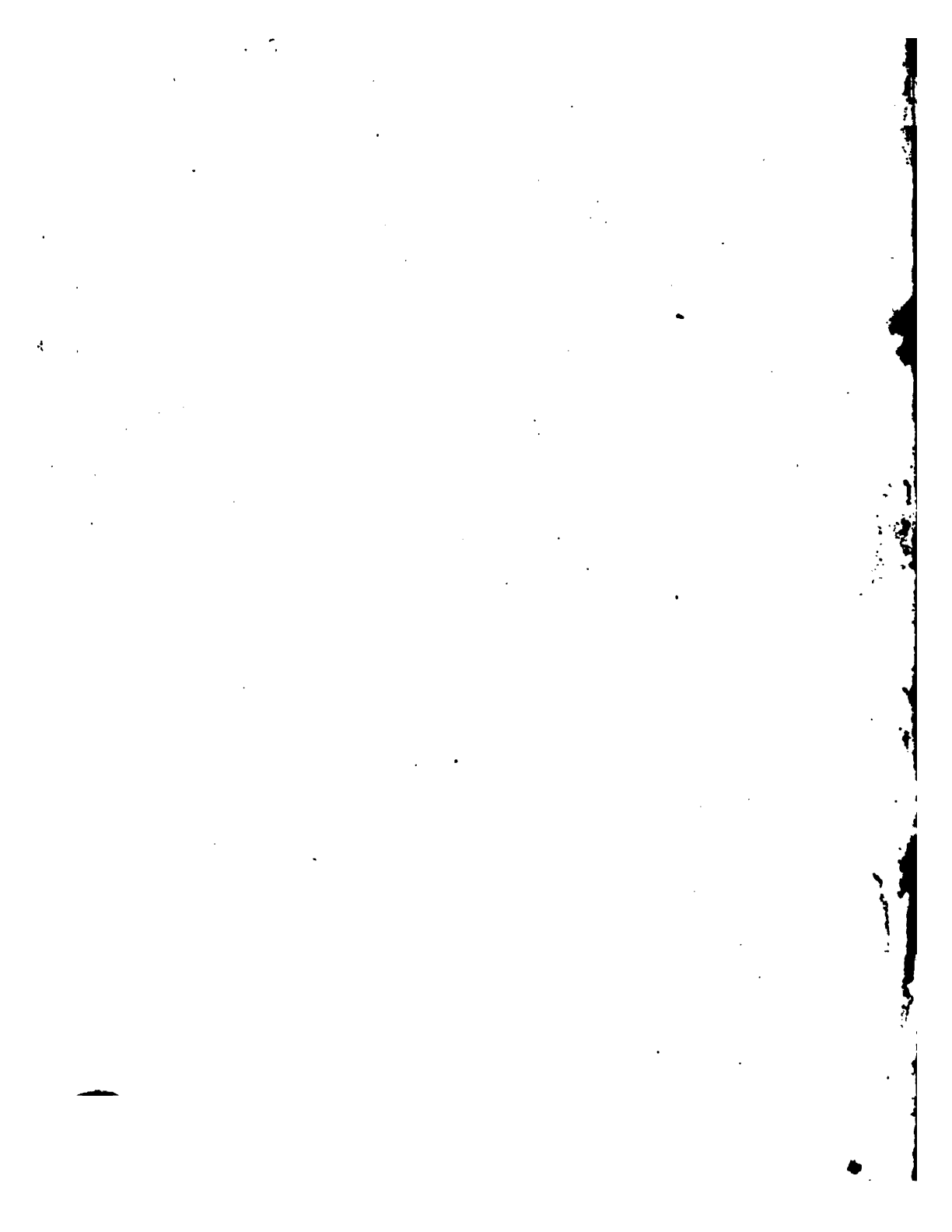
George Thomas Wyndham



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To

George Wrighte
Esquire,

Humbly Present.



R. White del. et sculp.

Effigies Edwardi Hatton.
Ætat. Suae 32. 1696.

T H E
Merchant's Magazine:
O R,
Trades Man's Treasury.

CONTAINING,

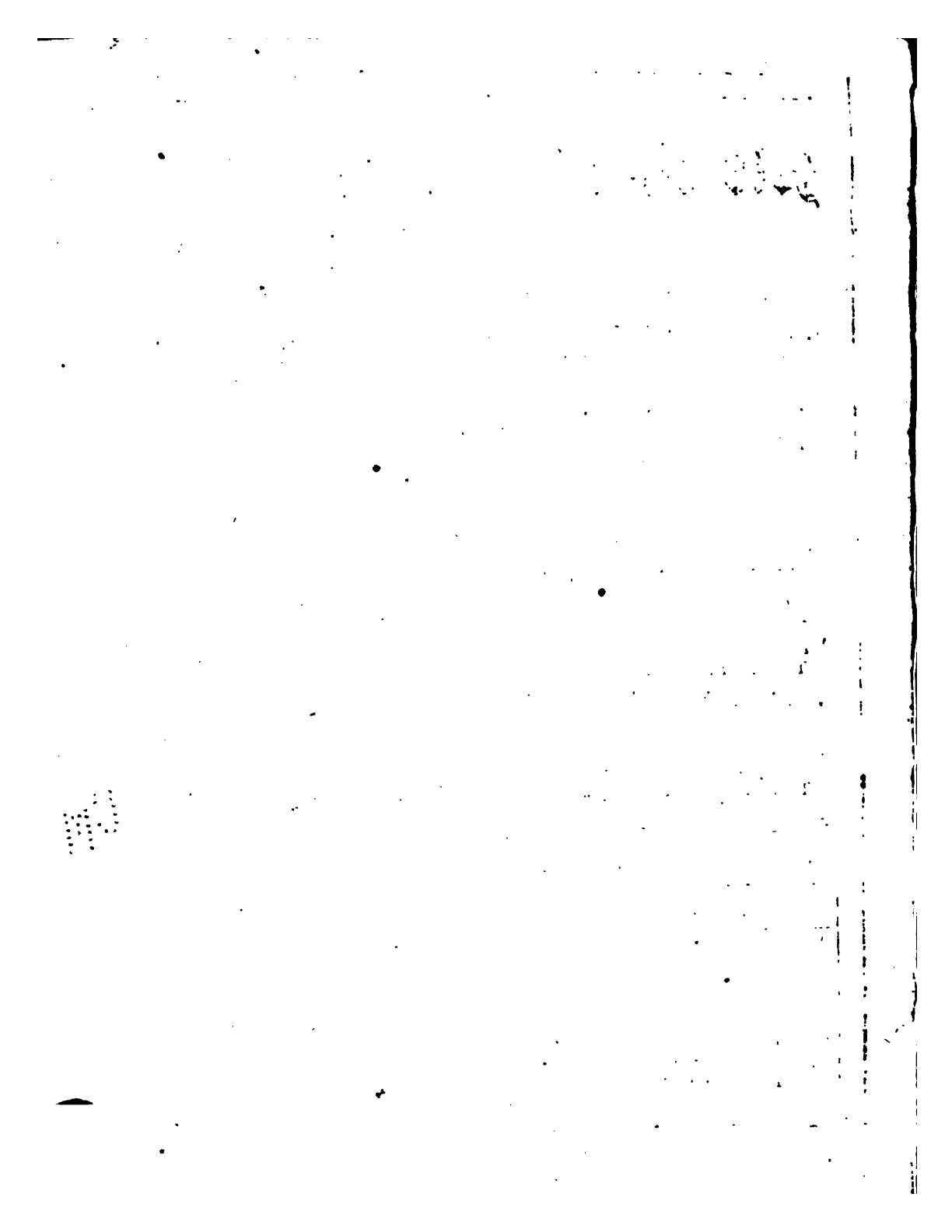
- I. **Arithmetick** in *Whole Numbers* and *Fractions*, *Vulgar* and *Decimal*; with the *Reason* and *Demonstration* of each *Rule*; Adorn'd with curious *Copper-cuts* of the chief *Tables* and *Titles*.
 - II. **Merchants Accounts**, or a most concise *Way* of *Casting up* the *Value* of *Merchandize*, *Tare* and *Trett*, *Interest of Coin*, *Rule of Barter*, *Loss and Gain*, *Fellowship*, *Equation of Payments*, and several *Matters* relating to *Exchange*, never before made *Publick*.
 - III. **Book-keeping**, after a *Plain*, *Easie* and *Natural Method*; shewing how to *Enter*, *Post*, *Close* and *Ballance an Account*, &c.
 - IV. **Maxims** concerning *Bills of Exchange*, *Factors* and *Factorage*: The *Law* concerning *Brokers*, &c.
 - V. The **Port of Letters** to and from *Foreign Countries*; and the *Days* when *Mails* are sent to, and due from those *Countries*.
 - VI. An **Account** of the *Commodities* produced by all *Countries*: Their chief *Towns* of *Trade*, and *business* of the *Country* compared with *England*.
 - VII. A **Merchant or Trader's Dictionary**, Explaining the most difficult *Terms* used in *Trade*.
 - VIII. **Precedents** of *Merchants Writings*; as, *Bills of Lading*, *Invoyces*, *Bills of Exchange*, *Letters of Credit*, *Charter-Parties*, &c. With many other *Things* not *Extant* before, as by the *Table of Contents* appears.
- Accommodated chiefly to the *Practice* of *Merchants* and *Tradesmen*: But is likewise useful for *Schools*, *Bankers*, *Diversion* of *Gentlemen*, *Business* of *Mechanicks*, and *Officers* of the *Queen's Custom* and *Excise*.

The Sixth Impression Corrected and Improved.

By ^{Author} E. HATTON, *Philomathemat.*

Arbre dejecta quivis ligna colligit. Juven.

LONDON, Printed by J. H. for Chr. Coningsby, at the *Ink-bottle*, over-against *Cliffords-Inn-Gate* in *Fetter-lane*, *Fleetstreet*; and Dan. Midwinter, at the *Three Crowns* in *St. Paul's Church-Yard*. MDCCXII.



Hest A dei.
Cantab.
2-16-33
2/669

To the Ingenious Author.

B*T* Numbers powerful, and harmonious Aid,
This stately Fabrick of the World was made.
The mighty Fiat was no sooner said,
But tuneful Numbers readily obey'd,
And the rude Chaos, Form and Beauty had.
Since, to Mankind subservient they become,
And suffer not that his wild Fancy roam,
And when it erring strays, conduct it home.
By a long Series found of mighty use,
Humane Affairs, to method to reduce.
By these, (after long Hazard, Toil and Pain,
Th' adventurous Merchant counts his Loss or Gain,
What is his Charge, and what that Charge maintains.
By these, each Art, and Science, is made known,
And their dark Mysteries reveal'd and shown.
By these, we Wars and Sieges undertake,
Great Conquests gain, and brave Defences make.
By these we sadly count for a past Life,
Made up of Labour, Sorrow, Care and Strife.
By these, we compass Earth, and Seas about,
By these, all's done, and nothing done without.
Yet, we were in Traditions dull track got,
And this Age copy'd what a former wrote,
And talk'd thereof as Rarities do by rote.
But you, to show your Pity, and your Love,
Reason and Practice make together move,
And a dull Age, as 'twere by Force improve.
Whilst others, poorly coast along the Shoar,
By Reason's Compass, you have ventur'd o're,
And taught us foreign Truths unknown before.
Go on, but know, great Danger you must run;
Of Rocks call'd Criticks, you may split upon;
I'll but this short Description of 'em mention,
They all things Damn for want of Apprehension.
But (for their Interest) let the Wise be kind,
By this they'll judge what still remains behind
In the Rich Treasury of your Wealthy Mind.

03-28-34M:W

To my very Ingenious Friend, the Author of
the following Treatise.

OUR Youth Arithmetick like Tricks are taught,
Which Monkeys are to do by Practice brought;
And hardly the Foundation better know,
Or reason of their working Numbers so;
But mimick just as they see others do. }
'Tis you my Friend, alone, have took away
This Cloud of Ignorance, by the bright Ray
Of Reason's Light, we now can walk and see,
Our practis'd Rules do with our Sense agree;
Safely we now on the Foundation tread,
And you through all the knotty Labyrinth lead.
You open to the World so clear a way,
They hardly if they would, could go astray.
But pardon me, I lessen by my praise
Your approv'd worth which I attempt to raise;
And these few Lines do only tell the Town
What was to every Man before well known;
Accept then what as Praise I would intend,
And if I injure you while I commend; }
Oh! take it as the fondness of your Friend.

C. J.

The Booksellers to the READER.

Since every one is not a competent Judge of the Intrinsic worth of Books, so as to distinguish between those of the same Subject whether well or ill done, and since all those that apply themselves to the Study of Arithmetick, or any other Art or Mystery, would certainly make choice of such Tracts for their Instruction as are most likely to accomplish them in a short time: But most being not capable of chusing for themselves, as unacquainted with the true Character of Books on that Subject, we thought it might not be improper to let 'em know the Excellency of the following Treatise, not only from the Acceptation it hath found in the World (upwards of 6000 having been printed in 5 former Editions) but also from the following Account given of it by the Authors of the *Works of the LEARNED*: for the Month of February, 1695.

It's needless for us to insist on the Usefulness of the Work, or spend many Words to give you an Idea of it, the Ingenious Author having already performed that in his Title Page: Only this we shall venture to say, that though it be with many Books, as it is with Persons who have a plump Countenance and a consumptive Body, the diligent Peruser will not find this Book to be such; but on the contrary, that the Author doth faithfully perform what his Title promises, and that in the most rational, plain, and compendious Manner, of any that we have hitherto seen upon the Subject: Nor can we forbear giving this Judgment of the Work, That it deserves Encouragement from the Publick, as being calculated for the Improvement of Trade and Commerce, to which our English Nation is so much indebted for their Fame and Grandeur, and that great Figure which they make in the World. And seeing the general Current of Education amongst the middling Sort of People, and not a few of the Gentry, does in our Days run towards Trade and Merchandize; we cannot but conceive that this Book, if once known, will meet with a general Acceptation by all Men of Business; who tho' they may, perhaps, think they don't stand much in need of it themselves, yet must certainly be convinced of its Usefulness, on many Occasions, to Men of the greatest Experience, and that it is absolutely needful for their Children and Servants, if they design to employ them in Trade or Commerce, or have occasion to Travel. And how
much

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much Labour it may save to School-masters, and Toil and Vexation to Scholars, those who are conversant in such Affairs, will be better able to judge than we are to express.

Since which first Impression, 14 or 15 Sheets having been added in the Second, besides some material Additions and Alterations in the Third, and Improvements in these others, we doubt not but upon perusal every unbiassed Reader will find the Character to be no more than the genuine Merits of this Book.

ADVERTISEMENT.

Comes *Comercii*, or the *Trader's Companion*. Containing, 1. An exact and useful Table, shewing the Value of any Quantity of any Commodity ready cast up, more adapted to Merchants Use than any other extant; which is demonstrated by 14 Examples, relating chiefly to Buying and Selling. 2. A Table calculated for universal Use, which Use is shewn in the Solution of Questions, in Multiplication, Division, Reduction, Merchandizing, and Measuring all kind of Superficies's and Solids, or Gauging Vessels and Casks. 3. The manner of casting up Dimensions in general, whether the same be taken in Inches, Feet and Inches, Yards, Perches, &c. and how to give the Answer by Reduction, Duodecimals or Decimals. 4. The several Customs used by Surveyers and Measurers in measuring Glass, Waincoat, &c. and the common Rate of such Work by the Rod, Foot, Yard, &c. 5. Instructions for entering Goods at the Custom-house, &c. with several material Clauses in the Statutes relating to Exportation and Importation. 6. Concerning Water-side Business, and the Constitution of the Keys, Wharfs, Porters, &c. there: Also the Charge of Wharfage, Lighterage, and Portage for Landing, Loading, Weighing, and Hoisting Goods, and what is usually paid for the Use of Ware-houses at the Water-side. 7. Rules concerning Freight, Bills of Lading, Primage, and how the same is paid for, &c. 8. Rules concerning Insuring Ships, Merchandize, Houses, &c. with many other things never before made publick. To which is added, A Supplement concerning Simple and Compound Interest, &c. Also to make up Accounts of Mortgages, where the Mortgagee has received the Rent, &c. By *Edw. Hatton*, Philomath.

Printed for *Chr. Coningsby* in *Fetter-Lane*, *J. Nicholson* in *Little-Britain*, and *Dan. Midwinter* in *St. Paul's Church Yard*.

Written also by the same Author: *An Index to Interest*, containing the largest (by many thousand Numbers) and most easie Tables of simple Interest that have been yet published, shewing the same at once for any Number of Days in the Year, and thence to 20 Years, at all usual Rates per Cent. Also Tables of Discount; present Worth of Annuities and Reversions, and of the Value of Church or College-Leases, all done in plain vulgar Numbers; also how to value one, two and three Lives, with a new invented Circle of Time, &c. useful for Gentlemen, Merchants, &c. Sold by the said *Chr. Coningsby* and *D. Midwinter*.

The PREFACE TO THE READER.

THE *First* Impression of this Treatise (though not so perfect in every respect as I could have wished, as being Composed, Printed and Published with too much Precipitation) having however, for its Usefulness and Familiarity, found Acceptation in the World, exceeding my Expectation: I thought my self obliged, in point of Gratitude, to endeavour in the *Second*, not only to rectifie and compleat what was amiss or imperfect in the Former, but also to study how (according to my utmost Ability) I might make it a Book farther useful to the Publick: And in order thereto, I made many considerable Additions; as, in *Arithmetick in Whole Numbers*, I added a Table of the Latin or Literal Numbers; several Tables in Addition, and a Discourse of the Use of those Tables: In *Division* a new Demonstration; and the Manner of reducing any Summ of Foreign Coin into English, for the ready casting-up Bills of Exchange. In *Vulgar Fractions*, I added the Reason of all those mysterious Rules given for Reducing, Adding, Subtracting, Multiplying and Dividing thereof; and did the like in *Decimals*, shewing how the Nature of them agrees with Vulgar. In *Merchants Accounts*, I added the Reason of the most abstruse Rules given for the brief working of Questions in *Practise*; and a more easie and (in many Cases) concise Method of finding the Tare of any Commodity: And in *Exchange* I added several useful Tables of Coin and Weight, with the Manner of calculating the *Par* of Foreign Coin by the Weights and Fineness: As also, an Explanation of the Tables of the Courts of Exchange, and Diversity of Proportions between Gold and Silver, Fine or Standard. In *Book-keeping*, I added Examples of a Cash-Book, Books of Household Expences, and Charges of Merchandize,

The Preface to the READER.

chandize, and shewed how the Letter are posted into the Former, and thence into the *Ledger*: Where, as also in the *Journal*, I added References to the *Folio's*, where every Parcel of Goods or other Matter is placed, both Debtor and Creditor in the *Ledger*, and likewise a better and more Natural way of keeping an Alphabet of Names. As to Maxims for drawing and accepting Bills of Exchange, I made them more copious and methodical; and added several concerning Factors; as may be seen in Chap. 11. And I likewise added *Chap. 12.* which shews what Commodities are produced by all Countries in the World, with the Names of their chief Towns of Trade, and the Magnitude of such Country compared with *England*, according to the best Account I could learn by Reading, Discourse, or Calculation, and shewed when Letters may be sent to, and received from those Countries: I also inserted the Law concerning Interest of Money. And in *Chap. 14.* I explained all the mysterious Terms or Words I could think on, that relate to Merchandizing; many of which I am sure are not to be found in any Expositor extant. And lastly, I added the greatest Variety of Merchants Presidents, in the best Method that are any where (to my Knowledge) exhibited; which will not only be useful for Practice to be transcribed upon occasion, but also will afford much Light into the Nature of that part of Trade, which they relate to. And in this sixth Impression I have given an Abstract of the new Statute concerning the Postage of Inland on Foreign Letters, and the Act relating to the Length and Breadth of *Yorkshire-Cloth*, and of the Value of Coin in *America*.

And thus I have given the Reader a Summary Account of the most material Additions, though there are very many (besides some few Alterations and Additions in the Third, and these other Impressions) which I have here omitted to mention, and I hope the whole will prove not only pleasant, but profitable; especially to the Younger sort of most Professions, and more particularly to the Merchant, for whose Province it was chiefly calculated; well knowing, that whatever conduceth to the facile and speedy Carrying on of Trade, does also contribute to the Augmentation of the Bulk thereof, and consequently to the Riches and Grandeur of the Nation: For as the ingenious and accomplish'd Merchant, *Sir Josiah Child*, says, *The Greatness of this Kingdom depends on Foreign Trade; and therefore the Interest of Trade not unbecoming Persons of the highest Rank.* 'Tis observable of the *Dutch*, that they Erect the most Noble

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Noble Tombs and Statues to the Memory of their Famous Sea-Commanders; which is a certain Indication, that they are sensible of the vast Advantages, which accrues to 'em by their Shipping, and I heartily wish we in this Nation were not less apprehensive thereof, we should not see so many Eminent Persons, of competent Fortunes, squander the same away, because they know not how to employ or improve 'em, and that caused by their Parents looking on their Extract to be above the Sphere of Commerce. Indeed the ill Practices of some Traders (especially the meaner Sort of Retailers) such as Lying and Cheating are too great Causes of bringing an an Odium on that Name: But if it be considered on the other Hand, that such Immoralities are not Essential to Trade, and that there are many, and I hope the greater part, that may and do grow rich by Traffick, who make Justice their Rule, and their Word a strict Obligation; then such Objections against Tradesmen will seem vain and frivolous: But 'tis the Foreign Trade, or Merchandizing, that I would chiefly here perswade some of our Persons of Quality to have a due Esteem of: Other Arts or Mysteries they usually value, according to the Profoundness and Excellencies of their Nature, or else to the Advantages usually attending them; for both which, the Employment of a Merchant is as valuable as that of a Lawyer, Physician, or any other Profession whatsoever: For if the necessary Perfections and Qualities of a truly accomplished Merchant be considered with respect to his Natural, Moral, and acquired Parts, it will place him (in the Opinion of the Judicious) far above Contempt.

For such a Merchant, as to his Natural parts, must have a quick Apprehension, a solid Judgment, and a sound Constitution of Body; his Apprehension to capacitate him for the understanding all that great Mystery of his Honourable Calling; his Judgment to secure him from being easily deceived and imposed on by those with whom he has Dealings, and a good Constitution and Soundness of Body, that he may do Variety of Business in different Places in a short Time.

His *Morals* must likewise be no less evident; his *Fortitude* such as gives him an undaunted Courage to adventure his Estate at Sea, notwithstanding all Dangers; and also to correspond and discourse not only with Foreigners and Barbarians, but with Princes and Statesmen; and (in short) to insist on his Right from all Persons in all Places whatsoever. And as his *Fortitude* must be great, so his *Prudence*

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deuce sets Bounds thereto, that it neither Degenerates into Impudence nor Fool-hardiness; for 'tis by this that a just Balance and a due Poize is kept in all his Actions; this is the Pole-Star that directs him how to steer in his many Novel and Momental Concerns; by this he first fixes on the most probable and secure way of enriching himself, and then prosecutes his Designs by the most proper Methods: This teaches him how to manage all his Domestic Concerns according to the various Mutations of things abroad; and 'tis his Prudence, whereby his Importations, Exportations, Buying, Selling, Exchanging by Bills, Bartering, Accompts, and all his Dealings are so ordered and carried on, as tend not only to his own, but the Interest of Trade in general. And as his *Prudence* makes him act wisely, so his *Justice* makes him act honestly: This restrains him from affirming a Commodity to be good, when 'tis bad; or Weight and Measure when deficient; or if he does so through Ignorance of such Defects, he scruples not to make a proportionable Abatement. This also makes him punctual to his Word in all his Affairs, which procures and increaseth his Credit; his Credit augmenteth the Bulk of Trade, and that Riches; and as an ingenious Authour has it, *The Merit of the Merchant is above all other Subjects; for while he is untouched in his Credit, his Hand-writing is a portable Coin for the Service of his Fellow-Citizen, and his Word the Gold of Ophyr to the Country where he resides.* This Merchant is not only accounted an honest Man by his Neighbours (which is sufficient for others) for his Character is well-known in Foreign Parts, as his Name or the Commodities he deals in; and by acquiring the Epithete of a *Just Man*, he can carry on as great a Trade as he that wants that, can do with treble his Stock. And if we consider his Temperance, Gravity, and Affability, they are such as improve his spacious Capacity and Intellects; the first makes him able to perform the most intricate part of his Business at any time, whenever it occurs, the second makes him staid to; and become his high and honourable Employment; and the third of an easie Access, gains him Love and Affection, and makes all that knows him delight to deal with him.

And as this Merchant is thus qualified with respect to his Natural Parts and Morals, so his *Acquired Parts* are such as fit him for the Practice of that great and copious Undertaking, to perform it with Ease and Satisfaction, and makes him a fit Correspondent or Companion for the most Noble or Judicious. To instance in
some

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Some of the necessary Accomplishments which properly denominate him a Merchant; He understands not only the Language, and Customs (with respect to Trade) of the Place where he resides, but also those of such Parts of the World where he has any considerable Traffick: He writes a fair and legible Hand, and the matter in a good Style, for satisfaction not only of Foreigners, who may not well understand his Dialect, but of Judges and Magistrates (in Case of Contest) who may be unacquainted with the Mysteries of Merchantile Concerns: He is likewise well-versed in Accounts, whereby he can do his Business the shortest and surest Way. And in *Book-keeping*, by Debtor and Creditor, which informs him with Ease and Certainty how Matters stand at any time with respect to *Mon, Money or Merchandize*, and to Profit and Loss, whether he goes forward or backward, grows Rich or Poor: He is likewise a good Proficient in Mathematical Learning, as in *Geometry*, by which he knows how to measure Board or Timber, or other Thing, relating to his Trade; as gauging Wine and Oyl Vessels, &c. In Navigation, whereby he knows the Distance and Routes leading to the most noted Ports or Places of Trade which are of use to him in Discourse and Agreements with Masters of Ships, &c. In *Geography*, thereby to know the Situation of the most remarkable Places of Traffick; what Commodities they produce, and also the Customs, Subsidies and Impositions paid upon Exportation or Importation, the Manner of Buying and Selling, with the Value of their Coins, Weights and Measures. Add to all this the clear Notions he has of the great Mysteries of Exchange; the Reason of its Rising and Falling, the Laws and Customs used in Drawing, Accepting, Endorsing, and Protesting Bills of Exchange, and the Quantity made up for Sale, Quality and Use of the most material and best Commodities, together with the Political part of Trade, as the Interest of all Countries, with respect to all Commodities, *i. e.* which are most proper for, or are to be prohibited Exportation or Importation: in this or that Country, and many other things; which should I particularize it would swell this Epistle beyond due proportion to the subsequent Treatise; all which a compleat Merchant must necessarily be acquainted with, in order to the qualifying him for the judicious Performance of his own Business, and that of his Country in a Court of Merchants. So that we may well conclude with the fore-cited ingenious Author, That of this

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Study, as well as others, it may be said, There is Infinity in it, none, though of the largest Intellectuals and Experience, being able to fathom its utmost Depth.

The *Book-keeping Part*, I purposely abbreviated to prevent discouraging the Reader in his first Attempts to acquire the Knowledge thereof, being very well assured many younger Learners have been confounded by the Multiplicity of Rules and Examples; for the several Entries in the *Waste-Book*, *Journal* and *Ledger* and *Ballancing*, being numerous and prolix makes it next to impossible they should have a just Idea of the Tendency thereof, I have therefore for the sake of such made the Examples few, and the Rules for Posting and Ballancing plain and easie to be apprehended; and for those who have acquired more Knowledge in this Art, I have given such Variety of Cases and Rules as may be a help to their Memory, as well as a Guide to those who are not so good Proficients; and had time permitted, I should have publish'd a Treatise by it self of Rules and Examples of the most mysterious Parts of *Book-keeping*. I must assure the Reader, that I have proceeded in composing the following Pages, in the most Familiar, Rational and Copious Method I could think proper in this Treatise, and have endeavoured throughout the whole, to prevent Error, and to explain those things most clearly, which others have either but transiently touch'd, or wholly omitted.

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An Advertisement concerning the Contents or Index to this BOOK.

That Chapter 14 (which is the Dictionary) is not included in the Index above; for the Words in that Chapter running in Alphabetical Order are Indexes to themselves, and may sooner be found there than elsewhere. But if the Reader look for a Word there, and cannot find it, let him look in the Index, and if it is in the Book, he will not there miss of it.

Allowance for Tare:

[121]

Example 2.] Let it be required to find the Nett-weight of the 12 Hundred, 2 Quarters, 26 Pound of Currants mentioned in *Case 8.* foregoing:

In order to perform which, I look in the Decimal Table, what part of 1 Hundred, 2 Quarters and 27 Pound is, and find it .733; and having deducted the 16 Pound Tare from 112, the Remainder is 96; wherefore I multiply 10733. by 96, and the Product is Nett-pounds.

$$\begin{array}{r}
 10.733 \text{ Hundred} \\
 \times 96 \text{ Nett-pounds in } 1 \text{ C.} \\
 \hline
 64198 \\
 96597 \\
 \hline
 1036.368
 \end{array}
 \left. \vphantom{\begin{array}{r} 10.733 \\ \times 96 \\ \hline 64198 \\ 96597 \\ \hline 1036.368 \end{array}} \right\} \text{Multiply}$$

1036.368 Nett-pounds which is equal to the pounds contained in the 9 Hundred, 00 Quarters, 23 Pound the Nett-weight of the Currants in the said 8th *Case*.

Case 9.] When the Hundred-weight is 5 Score, how to deduct the Tare at 5 l. per Cent.

Rule.] Take $\frac{1}{20}$ of the given Number, and you have the Tare required.

Example 3.] What is the Tare of 5 Baggs of Cotton-Yarn from *Aleppo*, Weight 1099 Pound at 5 l. per Cent.

$$\begin{array}{r}
 \frac{1}{20} \text{ of } 1099 \text{ Gross.} \\
 \hline
 54.95 \\
 \hline
 1045 \text{ Nett.}
 \end{array}$$

By the various Examples in the Cases foregoing, you may easily know how to make allowance for Tare at any rate per Cent, but in many Commodities the allowance for Tare is not reckoned per Cent. But so much of the Gross, called Invoice-Tare, thus.

[Q]

Case 10.]

[122] *Merchants Accounts: Or,*

Case 10.] When the Tare of Raw-silk from *Smyrna* or *Cyprus* is to be deducted: The

Rule.] Is (by the Book of Rates) to allow 16 pound Tare for 3 Hundred-weight and upward; from 3 Hundred-weight, down to 200 Weight 14 pound Tare; and from 200 Weight downwards, is allowed 12 pound Tare.

Example 1.] What is the Tare of 4 Bails of Raw-silk, Weight 1088 pound (Averdupoize?) Answer 58 pound.

		<i>lb.</i>		<i>lb.</i>
N ^o 1	℥	346,	Tare	16
3		300,	Tare	16
4		284,	Tare	14
8		158,	Tare	12
		Total Gross		1088
			Tare	58
		Remains <i>lb.</i>		1030 Nett.

Example 2.] Likewise in *Virginia* Tobacco, all Hogheads under three Hundred-weight, allow 70 pound Tare, from 3 Hundred to 4 Hundred 80 pound, from 4 Hundred to 5 Hundred 90 pound, and from 5 Hundred-weight upward 100 pound Tare.

So in the 6 Hogheads following, Weight 27 Hundred, 1 Quarter, the Tare is 4 Hundred, 3 Quarters, 8 Pound.

		<i>C.</i>	℥	<i>lb.</i>		<i>C.</i>	℥	<i>lb.</i>					
N ^o 5	2	3	4	Tare	0	2	14						
6	3	1	12,	Tare	0	2	24						
8	4	2	00,	Tare	0	3	06						
9	5	1	12,	Tare	0	3	16						
10	5	2	08,	Tare	0	3	16						
12	5	2	20,	Tare	0	3	16						
		Total Gross	27	:	1	:	00,	Tare	4	:	3	:	08
		Total Tare	4	:	3	:	08,	Deduct					
		Remains Nett	22	:	1	:	20.						



Ornamentation

Teacheth to read or write any
Number set downe or named.

The Table

						1	Units	1								
						2	Tens	1	2							
						3	Hundreds	1	2	3						
						4	Thousands	1	2	3	4					
						5	XThousands	1	2	3	4	5				
						6	CThousands	1	2	3	4	5	6			
						7	Millions	1	2	3	4	5	6	7		
						8	XMillions	1	2	3	4	5	6	7	8	
						9	CMillions	1	2	3	4	5	6	7	8	9

C H A P. I.

Notation and Numeration of Whole Numbers.

IN Order to the Right understanding how any Number is to be read or written, there are these Four Things to be considered:

1. The Characters by which all Numbers are expressed.
2. The Species or Kinds of Number.
3. The Order or Place: And,
4. The Multitude or Value signified by any Number.

First, The Characters by which all Numbers (how great soever) are expressed in Writing, are these Ten: *Viz.*

1, 2, 3, 4, 5, 6, 7, 8, 9, and (o) Cypher:

Secondly, The Species or Kinds of Numbers are Three: *Viz.*

First, Digits.

Second, Articles.

Third, Mixt Numbers.

1. A Digit is any of the Nine fore-mentioned Figures singly expressed: *Viz.* 1, 2, 3, 4, 5, 6, 7, 8, 9, which possess but One Degree or Place.
2. An Article is any of the Nine Digits, with a Cypher or Cyphers, placed to the Right-hand: As, 10, 100, 300, 5000, 6000, &c.
3. A Mixt Number is composed of Digits, or Cyphers and Digits promiscuously placed together: As, 12, 24, 96, 112, 120, 1769, &c.

Thirdly, The Order of the Places of Numbers is reckoned from the Right hand, toward the Left, as in the Table foregoing: Toward the Left-hand, 1 is in the First Place, 2 in the Second, 3 in

2 *Numeration of Whole Numbers.*

the Third, &c. But the Order of Reading Numbers is from the Left-hand, toward the Right, as shall be shewed by and by.

The Denomination of the Places are reckoned as followeth, and as in the foregoing Table.

The Denomination of the Places.

The Order of Places.	1	9	Units,
	2	8	Tens.
	3	7	Hundreds.
	4	6	Thousands.
	5	5	X Thousands.
	6	4	C Thousands.
	7	3	Millions.
	8	2	X Millions.
	9	1	C Millions.
	10	2	Thousands of Millions.
	11	3	X of Thousands of Millions.
	12	4	C Thousands of Millions.
	13	5	Millions of Millions, (or Billions.)
	14	6	X Millions of Millions, (or X of Billions.)
	15	7	C Millions of Millions, (or C of Billions)
	16	8	Thous of Mill. of Millions, (or M. of Billions.)
	17	9	X Thous. of Mill. of Millions, (or of Billions.)
	18	8	C Thous. of Mill. of Millions, (or of Billions.)
	19	7	Mill. of Mill. of Millions, (or Trillions.)
	20	6	X Mill. of Mill. of Millions, (or X of Trillions.)
	21	5	C Mill. of Mill. of Millions, (or C of Trillions.)
	22	4	Thous. of Mill. of Mill. of Millions, (or Thous. of Trillions) &c.

Fourthly, Having premised this, it will be able to read any Number, observing only these two things: *Viz.*

1. The Place any Digit possesseth.
2. The Value of that Digit.

First, By the preceding Table it is plain, That the First place toward

Numeration of Whole Numbers.

3

toward the Right-hand, is the place of Units; the Second, the place of Tens, the Third, the place of Hundreds, &c.

Second, Therefore suppose the Digit 9, stands in the Units place, the Value of it is 9; that is, 9 Units: if it stands in the Second place, 'tis 9 Tens, that is Ninety; if in the Third, or Hundreds place, 'tis 9 Hundred, &c. So we will suppose that the Digit 7 stands in the Fifteenth place, which (by the foregoing Table) is Hundreds of Millions of Millions; (or Hundreds of Billions) and the Value of that Digit, possessing that place, being (7 :) Admitting therefore that all the places toward the Right-hand of the said (7) were supplied by Cyphers, the Value of the Number would be Seven Hundred Millions of Millions: And, in like manner, the 22 Figures in the foregoing Table may be thus read:

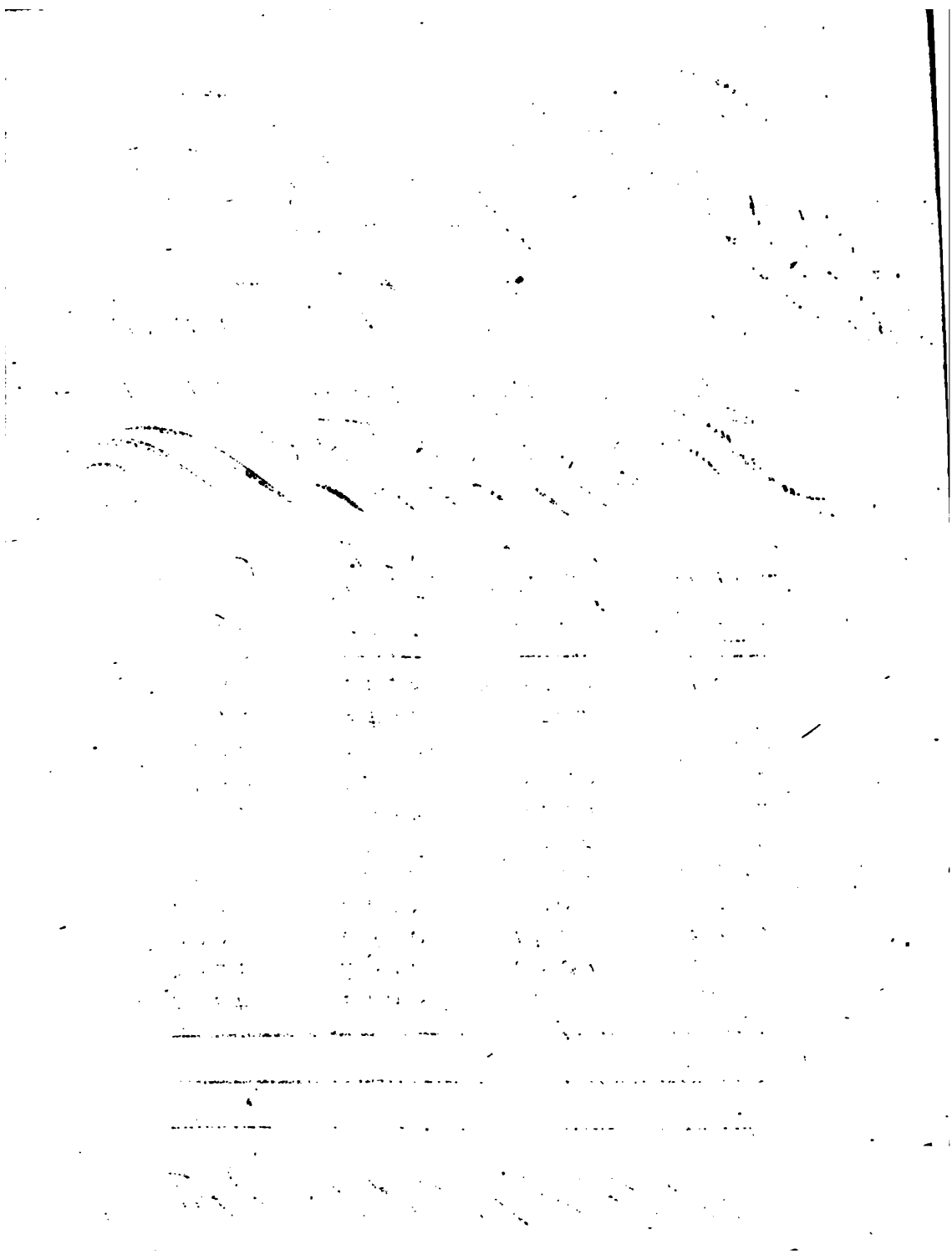
Four Thousand Five Hundred Sixty Seven Trillions,
Eight hundred ninety eight thousand 7 hundred sixty five Billions,
Four hundred thirty two thousand One hundred and 23 Millions,
Four hundred fifty six thousand seven hundred eighty nine.

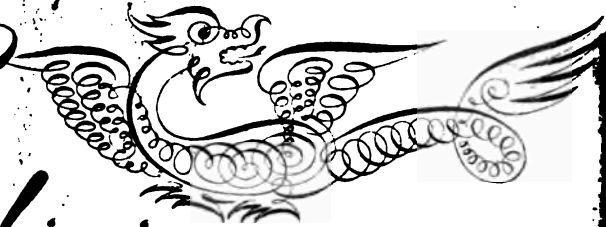
And by the same Rules are all other Numbers expressed; Where *Note*, That any place is Ten times the Value of the place next it, toward the Right-hand; As **IIIIIIIIII**, is 100000000, 10000000, 1000000, 100000, 10000, 1000, 100, 10, 1; That is, One Thousand Millions, is Ten times One Hundred Millions, which is Ten times Ten Millions, which is Ten times One Million, which is Ten times One Hundred Thousand, which is Ten times Ten Thousand, which is Ten times One Thousand, which is Ten times One Hundred, which is Ten times Ten, which is Ten times One; and the whole Number being read, is One Thousand One Hundred and Eleven Millions, One Hundred and Eleven Thousand, One Hundred and Eleven.

Numeration of Whole Numbers.

*The Value of the Latin, or Literal Numbers,
are as follows.*

I	1	XI	11		CC	200
II	2	XX	20		CCC	300
III	3	XXX	30		CCCC	400
IIII or IV	4	XL	40		D	500
V	5	L	50		DC	600
VI	6	LX	60		DCC	700
VII	7	LXX	70		DCCC	800
VIII	8	LXXX	80	DCCCC or CM	900	
IX	9	XC	90		M	1000
X	10	C	100		MDCCXII	1712





Addition Teacheth to
add sev^l sums together to make
them one Total

<i>Leaves</i>	<i>Yards</i>	<i>Poles</i>	<i>Quarts</i>
<u>1270</u>	<u>2734</u>	<u>3546</u>	<u>2795</u>
1021	3946	5737	1501
2370	6542	7845	7100
8426	5703	6721	5072
5603	0708	9654	8540
7206	1246	4060	3026
4570	2000	7241	1867
3872	3427	5426	9742
2106	7602	3213	6381
7285	9841	9762	7600
1707	1056	2187	3786
2834	5407	8615	4502

Total

Proof



CHAP. II.

Addition of Whole Numbers.

Addition is either Simple or Compound.

First, Simple Addition is when Numbers are to be added that have but one Name or Denomination, as Pounds to Pounds, Feet to Feet, &c.

Secondly, Compound Addition is when Numbers of divers Denominations are added together; as, Pounds, Ounces, and Drams, to Pounds, Ounces, &c. in both which Cases, these two Rules are to be considered.

The *First* is for the right placing the Numbers to be added.

The *Second* is for the adding together those Numbers after they are so placed.

1. *The Rule for placing the Numbers that are to be added.*

Observe to write the Units place of all your lower Numbers, under the like place of the Number above; Tens place under Tens, Hundreds under Hundreds, &c. (as in the Example foregoing, and those that follow:) And if the Numbers to be added are of divers Denominations, you are to place all the lower Numbers under those of the same Denomination above; as if you add 17s. to 2l. 7s. you must place the Numbers thus:

l.	s.
2	: 07
0	: 17

2. *The Rule for adding Numbers of one Name together, (let the Denomination be what it will,) is:*

Sum up every Series or linear Row of Figures, beginning at the undermost Figure towards the Right-hand, and place the Digit above Ten or Tens in that first Rank under the Line as followeth, and carry the said Ten or Tens to the next Rank toward the Left-hand, calling

Addition of Whole Numbers.

ling them so many Units, (for they are no more of that next Rank) and add all the rest of the Ranks as you have done the First: But if there is nothing above even Tens, when you have added any Rank together, then place a Cypher under that Rank, proceeding to carry the Tens, as is before directed: As in the following Example.

Admit I have owing to me for

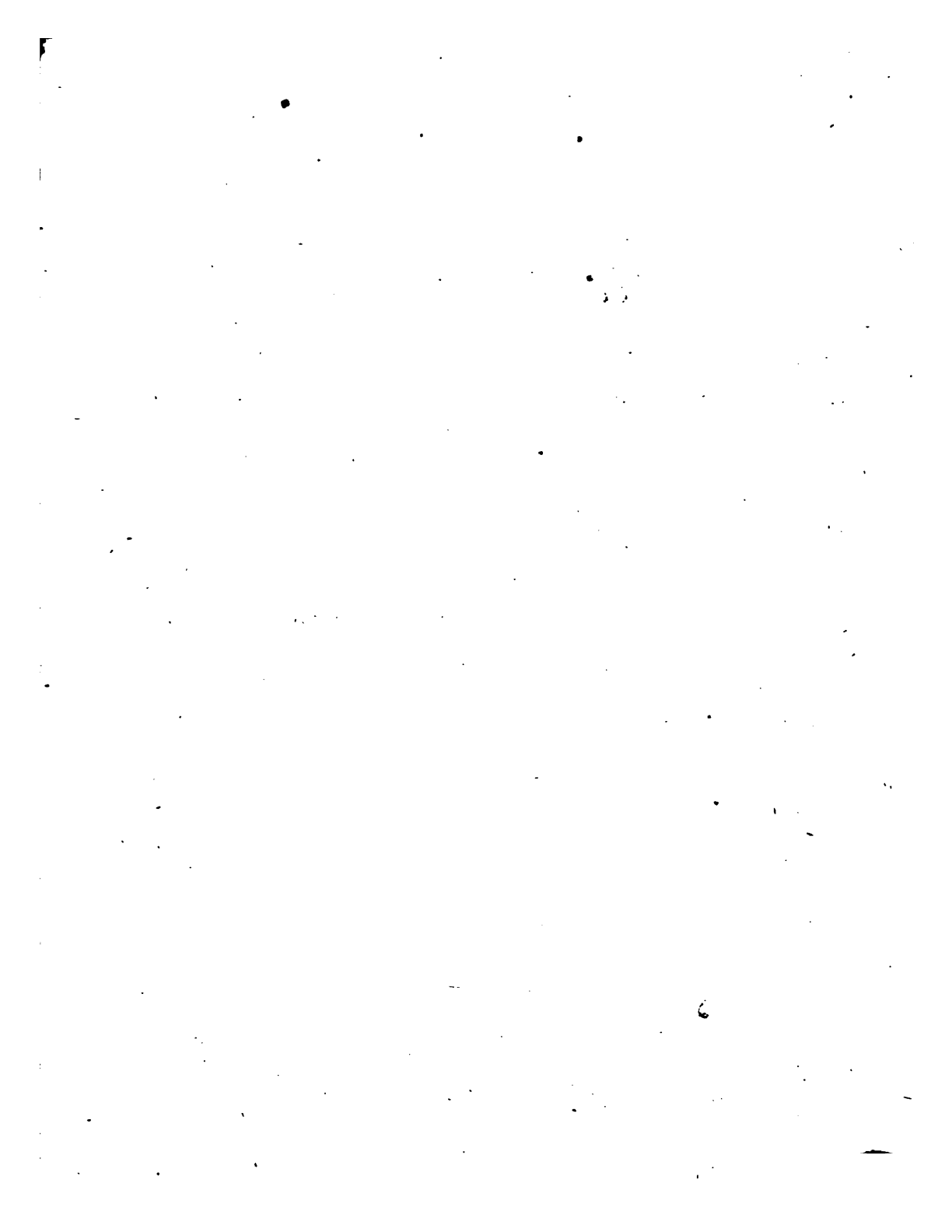
Holland Cloth	-----	3794
Thread	-----	896
Cambrick	-----	6285
Latten-Wyre	-----	3745
Sugar	-----	2392
Nutmegs	-----	3058

Total—20170

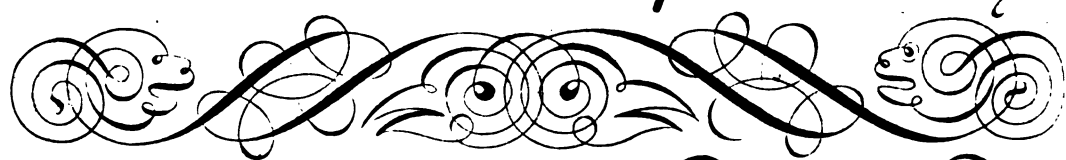
To know what Summ I am Creditor by, or what is owing me in all, I summ up the Particulars, beginning with 8 at the Angle, towards the Right-hand of the lowermost Line, as was before directed; saying, 8 and 2 is 10, and 5 is 15, and 5 is 20, and 6 is 26, and 4 is 30: put a Cypher under the Line, and carry 3 to the next Rank, toward the Left-hand; saying, 3 and 5 is 8, and 9 is 17, and 4 is 21, and 8 is 29, and 9 is 38, and 9 is 47; put the 7 under the Line, and carry 4 to the next Rank; saying, 4 and 3 is 7, and 7 is 14, and 2 is 16, and 8 is 24, and 7 is 31: put the 1 under the Line, and carry the 3 to the next Rank; saying, 3 and 3 is 6, and 2 is 8, and 3 is 11, and 6 is 17, and 3 is 20: which put all down, because you have no more Ranks; so will you find the Total to be 20170*l*. And after the like manner are any other Numbers of one Denomination added.

6. 2. For adding Numbers of divers Denominations together, observe this Rule:

Having the Numbers placed, as is before directed, and as in the Example following; Consider how many Units, of the least Denomination in the Numbers given to be added, make a Unit of the next superior Denomination, and how many Units soever you find of the next greater Denomination contained in the whole Rank, or Series, of the next lesser Denomination, so many must you carry to the said Rank of greater Denomination: And if any thing remains over



Addition of Money



d
s
li
s
d

12 - 1	270	16	08 $\frac{1}{2}$	397	17	10 $\frac{1}{4}$
24 - 2	<hr/>			<hr/>		
36 - 3	954	15	10	254	10	07
48 - 4	106	01	11 $\frac{1}{4}$	632	15	11
60 - 5	378	10	09	197	16	02 $\frac{1}{2}$
72 - 6	452	19	00 $\frac{3}{4}$	540	17	06
84 - 7	670	12	07	325	19	08
96 - 8	201	00	06 $\frac{1}{2}$	697	03	00
108 - 9	815	01	05	402	00	05 $\frac{3}{4}$
120 - 10	720	17	04 $\frac{1}{4}$	354	04	03
132 - 11	147	18	03	976	14	09
144 - 12	706	14	02 $\frac{3}{4}$	214	11	01 $\frac{1}{2}$
	908	03	10	107	13	04
	<hr/>			<hr/>		
	<hr/>			<hr/>		
	<hr/>			<hr/>		

Total

Proof

Addition of Whole Numbers.

over and above a Unit or Units of the next higher Denomination, such Overplus is to be placed under the Line.

To instance in the foregoing Example of Pounds, Shillings and Pence, toward the Left-hand: Where note, by the way, That

$\frac{1}{4}$ is one Farthing, or a Quarter of any thing.

$\frac{1}{2}$ is one Half-penny, or two Quarters of any thing.

$\frac{3}{4}$ is three Farthings, or three Quarters of any thing.

So in the Example aforesaid, 3 farthings and 1 is 4, and 2 is 6, and 3 is 9, and 1 is 10, and 2 is 12 farthings or 3 pence: which carry to the pence; saying, 3 pence and 10 pence is 13 pence, and 2 is 15, and 3 is 18, and 4 is 22, and 5 is 27, and 6 is 33, and 7 is 40, and 9 is 49, and 11 is 60, and 10 is 70, and 8 is 78 pence; that is, 6 s. 6 d. (as you may see by the Table of pence on Page 1 of this Chapter.) Put the 6 d. under the Line, and carry the 6 d. to the shillings; saying, 6 and 3 is 9, and 4 (taking but Units place of the shillings) is 13, and 8 is 21, and 7 is 28, and 1 is 29, and 2 is 31, and 9 is 40, and 1 is 41, and 5 is 46, and 6 is 52; put the 2 shillings under the Line, and carry the 5 to the Tens place of shillings; saying, 5 and 8 (Ten shillings) is 13: put the odd Ten shillings under the Line, and carry 12 Ten shillings to the pounds, calling them 6 pounds (by taking half of them,) saying, 6 and 8 is 14, and so forward as in the last Example of one Denomination; so you will find the Summ to be 6333 l. 12 s. 6 d. By the same Rule and Method you may find the Total of any other Number of Pounds, Shillings, and Pence: But,

Note, That because in Quarters of Hundreds, Ounces, &c. the difficulty of proceeding in that Method would be great; therefore your best way will be when you add Ounces in Averdupoize-weight, &c. to make a point or prick at every 16; so will you avoid charging the Memory, and may with ease carry the said points or pricks to the pounds; each point being 1 pound: A few Examples will make it plain, which you have after the Tables.

I. *The Table of English Coin for Addition and Substraction.*

4 Farthings is—1 Penny	6 Skill. 8 pence—1 Noble
4 Pence—1 Groat	10 Shillings—1 Angel
6 Pence—1 Tester	13 Skill. 4 pence—1 Mark
12 Pence—1 Shilling	20 Shillings—1 Pound
5 Shillings—1 Crown	

I. *The Table of English Coin for Reduction.*

In—1 Pound are 1 Mark and $\frac{1}{2}$ 2 Angels 3 Nobles 4 Crowns 20 Shillings 40 Testers 60 Groats 240 Pence 960 Farthings	In—1 Mark are 1 Angel & $\frac{1}{2}$ 2 Nobles 2 Crowns & $\frac{1}{2}$ 13 Skill. & $\frac{1}{2}$ 26 Testers & $\frac{1}{2}$ 40 Groats 160 Pence 640 Farthings	In—1 Angel are 1 Noble & $\frac{1}{2}$ 2 Crowns 10 Shillings 20 Testers 30 Groats 120 Pence 480 Farthings
In—1 Noble are 1 Crown & $\frac{1}{2}$ 6 Shillings & $\frac{1}{2}$ 13 Testers & $\frac{1}{2}$ 20 Groats 80 Pence 320 Farthings	In—1 Crown are 5 Shillings 10 Testers 15 Groats 60 Pence 240 Farthings	In—1 Shilling are 2 Testers 3 Groats 12 Pence 48 Farthings
In—1 Tester are 1 Groat & $\frac{1}{2}$ 6 Pence 24 Farthings	In—1 Groat are 4 Pence 16 Farthings	And in—1 Penny are 4 Farthings

II. The Table of Troy-weight to be used in Addition and Subtraction.

32 Natural grains of Wheat is 24 Artificial grains marked -- *grs.*
 24 Artificial grains is ———— 1 Penny-weight marked — *dw.*
 20 Penny-weight is ———— 1 Ounce marked ———— $\frac{3}{4}$
 12 Ounces is ———— 1 Pound marked ———— *lb*

II. The Table to be used in Reduction.

In 1 Pound are 12 Ounces 240 Penny-wt. 5760 Grains Artif. 7680 Natural grs.	In 1 Ounce are 20 Penny-wt. 480 Grains	In 1 Penny-wt. are 24 Grains
---	--	---------------------------------

III. The Table of Averdupois-weight used in Addition and Subtraction.

4 Quarters of a Dram is ———— 1 Dram = <i>dr.</i>	28 Pound ———— 1 Quarter of a Hundred = <i>qr.</i>
16 Drams ———— 1 Ounce = <i>oz.</i>	4 Quarters = 1 Hundr. = <i>C.</i>
16 Ounces ———— 1 Pound = <i>lb.</i>	20 C (or 19½ lead) 1 Tunn = <i>T.</i>

III. The Table to be used in Reduction.

In 1 Tun are 20 Hundred 2240 Pounds 35840 Ounces 573440 Drams	In 1 Hundred are 112 Pounds 1792 Ounces 28672 Drams	In 1 Pound are 16 Ounces 256 Drams, &
		In 1 Ounce 16 Drams

IV. The Table of Apothecaries Weight to be used in Addition and Subtraction.

20 Grains	-----	1 Scruple, mark'd	-----	℞
3 Scruples	-----	1 Dram	-----	ʒ
8 Drams	-----	1 Ounce	-----	ʒss
12 Ounces	-----	1 Pound	-----	℔

IV. The Table to be used in Reduction.

In--1 Pound		In--1 Ounce		In--1 Dram
are 12 Ounces		are 8 Drams		are 3 Scruples
96 Drams		24 Scruples		60 Grains, and
288 Scruples		480 Grains		In 1 Scruple 20
5760 Grains				Grains

V. The Table of Sheeps-Wool Weight to be used in Addition and Subtraction.

7 Pound	-----	1 Clove
2 Cloves	-----	1 Stone
2 Stone	-----	1 Tod
6½ Tod	-----	1 Wey
2 Weys	-----	1 Sack
12 Sacks	-----	1 Laft

V. The Table to be used in Reduction.

In--1 Laft		In--1 Sack		In--1 Wey
are 12 Sacks		are 2 Weys		are 6½ Tod
24 Weys		13 Tod		13 Stone
156 Tod		26 Stone		26 Cloves
312 Stone		52 Cloves		182 Pounds
624 Clove		364 Pounds		
4368 Pounds				

Tables of Liquid Measure.

11

In--1 Tod are 2 Stone 4 Cloves 28 Pounds	In--1 Stone are 2 Cloves 14 Pound	In--1 Clove are 7 Pound
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VI. The Table of Wine-Measure to be used in Addition and Substraction.

4 Quarts, or 231 solid-Inches, is	1 Gallon
42 Gallons	1 Tierce
1½ Tierce, or 63 Gallons, is	1 Hogs-head
2 Hogs-head	1 Pipe or Butt
2 Pipes	1 Ton

VI. The Table to be used in Reduction.

In--1 Ton are 2 Pip. or Butts 4 Hogs-heads 6 Tertians 252 Gallon 1008 Quarts.	In--1 Pipe are 2 Hogs-heads 3 Tierce 126 Gallon 504 Quarts	In--1 Hogs-head are 1½ Tierce 63 Gallons
--	--	--

In--1 Tierce are 42 Gallons 168 Quarts	In--1 Gallon are 4 Quarts 231 Solid Inches
--	--

VII. The Table of Beer-Measure to be used in Addition and Substraction.

2 Pints	1 Quart
2 Quarts	1 Pottle
2 Pottles, or 282 solid Inches, is	1 Gallon
9 Gallons	1 Firkin
2 Firkins	1 Kilderkin
2 Kilderkins	1 Barrel

Tables of Ale-Measure.

VII. The Table to be used in Reduction.

In--1 Barrel are 2 Kilderkins 4 Firkins 36 Gallons 72 Pottles 144 Quarts 288 Pints	In--1 Kilderkin are 2 Firkins 18 Gallons 36 Pottles 72 Quarts 144 Pints	In--1 Firkin are 9 Gallons 18 Pottles 36 Quarts 72 Pints
In--1 Gallon are 2 Pottles 4 Quarts 8 Pints 282 Solid Inch.	In--1 Pottle are 2 Quarts 4 Pints 141 Solid Inch.	In--1 Quart are 2 Pints 70½ Solid Inch. 35¼ Inches in 1 Pint

VIII. The Table of Ale-Measure to be used in Addition and Subtraction.

2 Pints	-----	1 Quart
2 Quarts	-----	1 Pottle
2 Pottles, or 282 solid Inches, is	-----	1 Gallon
8 Gallons	-----	}
2 Firkins	-----	1 Kilderkin
2 Kilderkins	-----	1 Barrel

VIII. The Table to be used in Reduction.

In--1 Barrel are 2 Kilderkins 4 Firkins 32 Gallons 64 Pottles 128 Quarts 256 Pints	In--1 Kilderkin are 2 Firkins 16 Gallons 32 Pottles 64 Quarts 128 Pints	In--1 Firkin are 8 Gallons 16 Pottles 32 Quarts 64 Pints
--	--	--

Tables of Dry Measure.

In--1 Gallon are 2 Pottles 4 Quarts 8 Pints 282 Solid Inches	In--1 Pottle are 2 Quarts 4 Pints 141 Solid Inches	In--1 Quast are 2 Pints 70½ Inches In 1 Pint 33½ Inc.
--	---	--

IX. The Table of Dry-Measure to be used in Addition and Substraction.

2 Pints	-----	1 Quart
2 Quarts	-----	1 Pottle
2 Pottles	-----	1 Gallon
2 Gallons	-----	1 Peck
4 Pecks	-----	1 Bushel Corn-Measure
5 Pecks	-----	1 Bushel Water-Measure
8 Bushels	-----	1 Quarter
4 Quarters	-----	1 Chaldron
5 Quarters	-----	1 Wey
2 Weys	-----	1 Last

IX. The Table to be used in Reduction.

In--1 Last are 2 Weys 10 Quarter 80 Bushel 320 Pecks 640 Gallons 1280 Pottles 2560 Quarts 5120 Pints	In--1 Wey are 5 Quarter 40 Bushel 160 Pecks 320 Gallons 640 Pottles 1280 Quarts 2560 Pints	In--1 Quarter are 8 Bushel 32 Pecks 64 Gallons 128 Pottles 256 Quarts 512 Pints	In--1 Bushel are 4 Pecks 8 Gallons 16 Pottles 32 Quarts 64 Pints
--	---	---	---

In--1 Peck are 2 Gallons 4 Pottles 8 Quarts 16 Pints	In--1 Gallon are 2 Pottles 4 Quarts 8 Pints	In--1 Pottle are 2 Quarts 4 Pints	In--1 Quart are 2 Pints In--1 Pint a- bout 33½ Inch. Solid.
--	--	---	---

X. The Table of Long-Measure to be used in Addition and Subtraction.

9 Barley-Corns	1 Inch
12 Inches	1 Foot
3 Foot or 16 Nails	1 Yard
45 Inches	1 Ell English
27 Inches	1 Ell Flemish
2 Yards	1 Fathom
9 Yards and $\frac{1}{2}$	1 Pole or Perch
40 Perches	1 Furlong
8 Furlongs	1 English Mile

X. The Table to be used in Reduction.

In—1 Mile are 8 Furlongs 320 Poll or Per. 1760 Yard 5280 Feet 63360 Inches 259200 Barley-Corns	In—1 Furlong are 40 Polls 220 Yards 660 Feet 7920 Inches 23760 Barley-Corns	In—1 Poll or Perch are $5\frac{1}{2}$ Yards 16 $\frac{1}{2}$ Feet 198 Inches 594 Barley-Corns Length
In—1 Yard are 3 Foot 36 Inches 108 Barley-Corns	In—1 Foot are 12 Inches 36 Barley-Corns	In—1 Inch are 3 Barley-Corns Length

XI. The Table of Square or Superficial Measure to be used in Addition and Substraction.

16	Quarter of an Inch	is	1	Inch
144	Inches	is	1	Foot
9	Foot	is	1	Yard
30	Yards	is	1	Poll
40	Poll long, and 1 broad	is	1	Rod of Land or Qr. of an Acre
4	Square Rods	is	1	Acre
640	Acres	is	1	Square Mile

XI. The Table to be used in Reduction.

In—1 Squ. Mile are 640 Squ. Actes 2560 Rods 102400 Poll or Perch. 3097600 Yar. 27878400 Feet 4014489600 Squ. Inches	In—1 Square Acre are 4 Square Rods 160 Square Perch. 4840 Yards 43560 Feet 6272640 Inches	In—1 Square Rod are 40 Perches 1210 Yards 10890 Feet 1568160 Inches
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In—1 Sq. Perch are 30½ Yards 272½ Feet 39204 Inches	In—1 Sq. Yard are 9 Sq. Feet 1296 Inches	In—1 Sq. Foot are 144 Inches
--	--	---------------------------------

XII. The Table of Dozen to be used in Addition and Substraction.

12	Pieces, or Things, is	1	Dozen
12	Dozen	is	1 Small Gross
12	Small Gross	is	1 Great Gross

XII. The Table to be used in Reduction.

In 1 Great Gros are 12 Small Gros 144 Dozen 1728 Pieces, or Things	In 1 Small Gros are 12 Dozen 144 Pieces, or Things	In 1 Dozen are 12 Pieces, or Things
--	---	---

XIII. The Table of Time to be used in Addition and Subtraction.

60" Seconds	1 Minute
60' Minutes	1 Hour
24 Hours	1 Natural Day
7 Days	1 Week
4 Weeks	1 Month
13 Months 1 Day and 6 Hours	1 Solar Year

XIII. The Table to be used in Reduction.

In 1 Year are 52 Weeks 365 Days and 6 Hours 8766 Hours 525960 Minutes 31557600 Seconds	In 1 Week are 7 Days 168 Hours 10080 Minutes	In 1 Day are 24 Hours 1440 Min.	In 1 Hour are 60 Mi.
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But, *Note*, That from the time the Sun leaveth 1 Tropic to the time it returns to that Tropic is computed 365 Days, 5 Hours, 42 Minutes, 4 Seconds, and 21 Thirds.

And that by the last Table above for Reduction,

It will be found since the Creation }
which is 5659 Years. } 2976407640 Minutes

And since the Incarnation at *Lady*- }
day, 1711. } 899917560

Each performed at 1 Operation by the said Table, as you will perceive (when you arrive at the Rule of Reduction) with many other excellent Uses of these Tables.

XIV. The

XIV: The Table of Motion.

60'' (Seconds)	maketh	—	1 Minute.
60' (Minutes) or Miles,	}	—	1 Degree.
or 4' of Time			
30 Degrees	—	—	1 Sign of the Zodiack.
3 Signs or 90°	—	—	1 Quadrant.
4 Quadrants or 360°	—	—	1 Circle of the Sphere.

§. 4. The Use of the Foregoing Table.

YOU have for each of the foregoing Denominations of Money, Weight, Measure, &c. 2 Sorts of Tables: The uppermost shewing how many Units of an inferiour Denomination are contained in an Unit of the next superiour Denomination, by which you may know how to add or subtract any Numbers of those Denominations. The other Tables under the former, shew how many Units of any of the lower Denominations are contained in an Unit of a higher Denomination, which is very useful for the speedy reducing of any thing from one Denomination to another.

The first Table is of *English* Coin, the least Denomination of which is a Farthing, and the greatest of our real Pieces of Silver, a Crown or 5*s.* 4 whereof make 1 Pound or 20*s.* concerning which Money you have a farther Account in Exchange of Coin.

The second Table is of Troy-Weight, by which is weighed Bread, Corn, Jewels, Gold, Silver, Amber, and Electuaries; and all Measures for Wet and Dry are taken from this-Weight. By the Statutes of 5*H.* 3 *Stat.* 7. and 31 *Edw.* 1 12 *H.* 7. *Ch.* 5. it was Enacted, That one Penny should contain in Weight 32 Natural Grains of Wheat taken out of the middle of the Ear, or 24 Artificial Grains, as in the Table of Troy-Weight. *Vide Rasfal. Weights,* 7, 8.

The third Table is of Averdupoize-Weight, 16 Ounces or 1 Pound of which is equal to 14 *oz.* 12 *dw.* Troy. By this Weight is weighed all manner of things that have waste, as Physical and Grocery Drugs, Rozen, Wax, Pitch, Tarr, Tallow, Butter, Cheese, Soap, Hemp, Flax, Flesh, Iron, Steel, Tinn, Copper, Lead, Alum, Copperas, &c. 100*l.* of which is the Hundred; and

18 *The Use of the Foregoing Tables.*

in adding, for every 16 Drams carry one to the Ounces, for every 16 Ounces carry 1 to the Pounds, for every 28 in the Pounds place, carry 1 to the Qr. of Hundreds, for every 4 in the Qr. of Hundreds carry 1 to the Hundreds. Note, That 56 *oun. Averd.* is 51 *oun. Troy* very near.

The fourth Table is of Apothecaries Weights, by which they compound their Medicines, tho' they buy and sell their Drugs by the Averdupoize-Weight. In adding this Weight, for every 20 in the Grains place, carry 1 to the Scruples, for every 3 Scruples, carry 1 to the Drams, for every 8 of these Drams, carry 1 to the Ounces, for every 12 Ounces, carry 1 to the Pounds place.

The fifth Table is the Weight by which Sheeps-wool is weighed: in adding of which Weight, you are for every 7 Pound to carry 1 to the Cloves place, for every 2 Cloves to carry 1 Stone, for every 13 Stone carry 1 to the Weys place, &c.

The sixth Table is of Wine-Measure, where, in adding, you must for every 4 Quarts, carry 1 to the Gallons, for every 63 Gallons, carry 1 to the Hogs-head's place, for every 2 Hogs-heads, carry 1 to the Pipe's place, and for every 2 Pipes, carry 1 to the Tun's. Note, That the Wine Gallon contains but 231 solid Inches by the Standard of the Exchequer, which is less than the Ale or Beer Gallon. By which Gallon of 231 Inches, all other Liquids, except Ale and Beer are measured by the 12 Ch. 2. And note, That a Pint of Wine weighing $\frac{104}{100}$ of a lb. Averdupoize; the Tun (or 252 Gallon) will weigh 17 C. weight.

The seventh Table is of Beer Measure containing 282 solid Inches to the Gallon, by which Strong, Mild, and Small Beers are measured; the Denominations usually added by Excise Officers, &c. are for every 9 Gallons, carry 1 to the Firkins, for every 4 Firkins, carry 1 to the Barrels, 36 Gallons being 1 Barrel by the 12 of Ch. 2.

The Eighth Table is of Ale Measure, containing as the Beer 282 solid Inches, but the Barrel is less than the Beer Barrel, by 1128 solid Inches, or 4 Gallons: so that for every 8 Gallons, carry 1 to the Firkins, and for every 4 Firkins, carry 1 to the Barrels, 32 Gallons being 1 Barrel by 12 Ch. 2. Vid. 11, 12 W. 3.

The ninth Table is of Dry Measure, for Corn, Salt, Sea-Coal, &c. And in adding, you are for every 2 Gallons or $\frac{1}{2}$ Peck to carry one to the Pecks, for every 4 Pecks carry one to the Bushels, and for every 8 Bushels carry 1 to the Quarters, which is the highest Denomination of Corn-Measure. Vid. Stat. 1. Q. A. (Ses. 2.) &c. where

The Use of the Foregoing Tables. 19

where Malted Corn, &c. is to be measured by a Bushel 18 Inches and a half diameter, and 8 Inches deep; so that every Inch deep upon this Gauge-point is a Gallon (or 268.8 Inches) and the said Dimensions by the said Acts are to be those of a *Winchester* Bushel, which by consequence contains 2150.425 Inches solid.

The tenth Table is of Long-Measure, in which no notice is taken of Breadth, as of Heights, Depths, Distances, Length of Cloth, Roads, &c. and in adding this kind of Measure, you are for every 3 Foot or 4 Quarters of a Yard to carry 1 to the Yards, for every 11 half Yards carry 1 to the Perches, for every 40 Perches carry 1 to the Furlongs, and for every 8 Furlongs carry 1 to the Miles. But note, That tho' 5½ Yards is a Poll or Perch, according to Statute, yet in some Countries they have 7, 7½, and 8 Yards to the Poll called customary Measure. Tho' 160 Square Perches, each 5½ Yards is an Acre by the 24 H. 8. Ch. 8.

The eleventh Table is of Superficial Measure, which is that wherein Length and Breadth is consider'd, as in measuring Board, Glass, Pavements, Waincoat, Tiling, Plastering, Flooring, &c. where for every 144 Inches, you must carry 1 Foot, for every 9 Foot 1 Yard; or in Land, for every 40 Square Perches carry 1 to the Rods, for every 4 Rods carry 1 to the Acres. And note, That the solid Foot is 12 Inches long, 12 Broad, and 12 thick, or 1728 solid Inches, used in measuring Timber, Stone, &c.

The twelfth Table is of Dozen, useful in-adding things computed thereby, which are very numerous, of which, such wherein the great Gross is used, you have following. In adding hereof, you must for every 12 carry 1 to the Dozens places, for every 12 Dozen 1 to the small Gross, for every 12 small Gross 1 to the great Gross.

The thirteenth Table is of Time; of which some say, How can 365 Days and 6 Hours be found in a Year, since to multiply 52 Weeks by 7 Days, produceth but 364 Days? But if such Querist looks into his Almanack (wherein no doubt but he believes all contain'd) he will find 52 Weeks and 1 Day in a Year, and every fourth Year, 52 Weeks, 2 Days, or 52 Weeks, 1 Day and 6 Hours every Year one with another, according to the English Account of computing Time.

The fourteenth is a Table of Motion, whereby the Motion of the Heavenly Bodies, as the Sun, Moon, &c. (or of the Earth, according to *Copernicus* his System of the World) is computed, of which I need say nothing more, it being more used by the Astronomer than Merchant.

S. 5. Tables of Quantity in Whole-Sale Trade.

Note, That Things in a Whole-sale-way Bought and Sold by the 1000, are

Tacks.	Trunnels.
Chair-Nails and Tenter-Hooks.	Billets.
Brick-Stones.	Ox-bones.
<i>Flanders</i> , Paving and Pantyles.	Leaves of Horn for Lanterns.
Cuttlebones.	Ox-horns.
Pack and Sail-Needles.	Hoops for Barrels.
Oranges and Lemons.	Roe Buck, and Stags Tips.
Pomgranates.	Pieces of Box-wood for Combs.
Goose-Quills.	Lamperns.
Copper Spangles.	Yards of Cloth Lift.
Tazles.	Squirrel Skins.
Thimbles.	Slate and Hitting Stones.

Pins and Small Needles by the 1000 Dozen.

120 in Number is the Hundred of

Balks of all sorts.	Nails.	Coney, Stag, } Skins.
Barlings.	Eggs.	and Lamb }
Barrel-boards.	Codfish.	Oars.
Pipe-Boards.	Colefish.	Hogs-heads Staves.
Bomspars.	Lingfish.	Ells of Drilling; } Linnen
Bow-staves.	Newlandfish.	Pack-Duck, } Cloth.
Cant-sparg.	Stockfish all forts.	<i>Hamborough,</i>
Capravens.	Heading for Pikes.	<i>Silecia, Irish,</i>
Herring.	Ells of Canvas, except Strip'd, Tuffed or Quilted:	<i>Muscovia,</i>
Deal Boards.		<i>Westphalia,</i>
		<i>Hanover, &c.</i>

Of Clap Board the Great Hundred is 24 Small, or 2880, and the Thoulnd Herrings is 1200.

By

Tables of Quantity, &c.

By the Great Grofs containing 12 small Grofs or 144 Dozen are bought and fold in a Whole-sale way of Trade.

Metal,	}	Buttons	Comb and	} Cases
Glass,			Spectacle,	
Thread,			Lightwood	} Combs
Silk,			and Box	
Handkerchief,			Chess-men.	} Points
and Hair,			Thread and	
Cap-hooks.			Silk	
Playing Cards.	Tobacco Pipes.			

Things of which five Score is reckoned a Hundred Weights.

Crossbow-Thread.	}	Capers.	
Ginger.		China Roots.	
Horse-Tails with Hair.		Brass and	} Manufactures.
Indigo.		Latin	
Thrums.			

Of Hay the Stone is 14*l.* 4 of which, or 56*l.* is 1 Truss by *William and Mary, Chap. 8.* or of new Hay 60*l.* to the Truss in *June* and *August*, on forfeit of 18 pence *per* Truss; and the Load is 36 Truss 56*l.* old Hay.

Of Iron and Shot, 14*l.* is one Stone, 2 Stone 1 Quarter of a Hundred, &c. as in *Averdupoize Weight*.

In *Essex* they weigh Cheese and Butter by the Clove of 3 pounds, and 31 to the Wey. But in *Suffolk* they allow 42 Cloves or 316 pounds to the Wey.

The Barrel of sundry Commodities, is as follows:

Anchovies ————— 30	} Pound.	Raisins ——— 1 C. Weights.
double Barrel ————— 60		Oyl ——— 3 1/2 Gallons.
Nuts or Apples ————— 3	Bushel	Spanish Tobacco — 2 to 3 C.
Peas or Barilla ————— 200	Pound.	Gunpowder — 1 C. Weights.
Salmon or Eggs ————— 42	Gallons.	Soap ——— 240 <i>l.</i>
White or black Plates — 300	Plates.	Butter ——— 224 <i>l.</i>
Candles ————— 10	dozen Pound.	Hstring ——— 32 Gallons.
Figs ————— 0 C. 39. 14 <i>l.</i> to 2 1/2 C.		

22 *Tables of Quantity in Wholesale Trade.*

Of Timber, 43 solid Feet make 1 Tun, or 50 Foot Rough Timber 1 Load. By the Book of Rates, 12 Car. 2.

600 Foot of 1	} Inch Plank, make 1 Load.
400 Foot of 1 1/2	
300 Foot of 2	
200 Foot of 3	
150 Foot of 4	

Where Sea-Coal and Salt are measured by the Corn-Measure, they are Heaped, or else there are 5 Striked Pecks to the Bushel; 36 such Bushel in a Chaldron of Sea-Coal, and 21 Chaldron to the Score. The Bushel for Apples (except in London and 3 Miles round) is to be heap'd, and contain 18 Inches and a half Diameter within, and 8 Inches deep, by Stat. 1. Q. An.

The Abstract of the Act Anno 7^o Ann. Reg. for Ascertaining the Length and Breadth of Woollen-Cloth made in the County of York, is as follows:

That after the 24th of June, 1709, all Broad Cloth made in the County of York, whether called an End or Half Cloth, or a Long or Whole Cloth, being well Scour'd and fully Mill'd, shall be five Quarters and a half by the Yard Wand in breadth within the Lisse in the Water, being fully wet. And such Cloth called an End, shall not exceed 23 Yards in Length, being fully wet; and Long or Whole Cloth shall not exceed 46 Yards. And Cloth called Whole Thick Kerseys, and Whole Thick Plains shall not be made under 17 Yards and a half in Length, and not less than 3 Quarters and a half in Breadth when fully wet. Any Person that makes or offers to Sale any Cloth not according to the said Breadths and Lengths, being Convicted by Oath of any Overseer or Searcher of Cloth, or of any Credible Witness, before a Justice (not being a Trader in Woollen) for every Inch the said Cloth shall be less than the respective Breadths; and for every Yard the Broad Cloths, called Whole Cloths, exceed 46 Yards in Length; or an End 23 Yards; or for every half Yard the whole thick Kerseys, or whole thick Plains, shall be less than 17 Yards and a half, shall forfeit 20 Shillings, and the Owner of every Fulling-Mill shall mark the Cloth with Lead, shewing its Length and Breadth as aforesaid. *Vide also the Statute Primo An. Regine. §. 6. Ex-*

Addition of Weights and Measure. 23

§. 6. Examples of adding Numbers of divers Denominations.

Example I.				Example II.					
Of Troy-Weight.				Averdupoize-Weight.					
Lb.	oz.	dw.	gr.	Tun.	C.	Qr.	lb.	oz.	dr.
416	08	15	20	147	16	3	14	15	15
842	01	10	05	119	03	1	04	01	00
26	11	04	17	7	19	3	27	10	08
22	06	19	23	1	10	2	10	12	12
Totals—1308				276					
04	10	17		10	3	01	09	03	

Example III.				Example IV.			Example V.		
Of Wine-Measure.				Beer-Measure.			Ale-Measure.		
Ton.	Buts.	H-ds.	Gal.	Bar.	Fir.	Gal.	Bar.	Fir.	Gal.
31	01	01	38	31	03	08	71	03	07
10	01	00	10	17	02	01	18	01	01
5	00	01	66	12	01	05	28	00	02
7	01	01	09	72	03	06	13	02	06
Tot. 55				134			132		
01	00	54		03	02		00	00	

Example VI.				Example VII.			
Of Time.				Of Dozens.			
Days.	Hours.	Min.	Seconds.	Gr. Grs.	Sm Gr.	Things Doz. or Pieces.	
34	12	40	48	56	10	06	11
420	5	10	20	148	09	11	03
510	23	59	50	26	11	01	09
21	10	00	11	533	02	08	10
987				765			
3	51	9	Totals—	10	04	09	

By.

By these few Examples, with the help of the foregoing Tables, the Learner will be enabled to add any Numbers proposed of what Denomination soever; which Tables he will find exceeding Useful, not only in this Rule of Addition, but likewise in the following Parts of Arithmetick and Merchant's Accompts.

§. 6. The Reason and Demonstration of Addition.

BY *Euclid*, Lib. 1. Axiom 9. of his *Elements*, the Whole is equal to all its Parts taken together.

So the Right-line (*gb*), is equal to the 3 lines *ab*, *cd*, and *ef*:

For the 3 lines *ab*, *cd*, and *ef*, being all the Parts contained in the whole line *gb*, and the line *ab*, added to *cd*, and that Summ to *ef*, making up the line *gb*; therefore the line *gb*, is equal to the Summ of the Parts, *viz.* to *ab*, more *cd*, more *ef*, taken together:

Or, in Numbers I say, that 15, 16, and 42 make up 73; which cannot be denied, since there are no more Units in 73, but 15, 16, and 42; and the Units in 15, 16, and 42, making 73; therefore the Number 73, must be equal to the Numbers 15, 16, and 42.

Parts	}	15
		16
		42
		—
		Total-73

2. The Reasonableness of the Rules given for adding Numbers together, will thus appear from what was said in Numeration, of the places of Numbers: For in Addition every degree or place must be added to the like degree or place; So that in the Units place, if there is one or two Tens, it is plain that those one or two Tens must be added to the Numbers in Ten's place, because they are of the same Denomination; so if in a Rank of Figures (in Ten's place) I find 2 or 3 times Ten, for every 10 in Ten's place, I have One Hundred to carry to the Hundred's place, for 10 times 10 is One Hundred, as was observed before; Hundreds must be added to the Hundreds, because 'tis of the same degree or place.

For Example.

	l.	s.	
In adding 149 l. 17 s. to 18 l. 8 s: I say,	149	17	} Parts.
8 shillings and 7 shillings, is 15 shillings, which	18	8	
is 1 Ten to be carried to the place of Ten shillings, which one Ten being added to the other	168	5	Total.
Ten, makes two Tens, or 20 shillings: which being one Unit of the next Denomination, viz. Pounds, I therefore add the 1 pound to the Unit's place of pounds; saying, 1 and 8 is 9, and 9 is 18 pounds; which 8 being Units of pounds, I place it in the Units of Pound's place of the Summ, and carry the 10 pound to the 10 pound's place, of which Denomination it is one: So 1 Ten and 1 Ten is 2 Tens, and 4 Tens is 6 Tens, which being less than 10 Tens, or 100, I have nothing to carry to the Hundred's place; so I place 6 in Ten's place of the Summ, and put the 100 to the Left-hand in Hundred's place of the Summ: This being observed, any Summ may be added, without carrying any thing from one degree or place to another, (which is done purely to save trouble:) For instance;			

Let it be { 2976
 required { 4132
 to add, { 8647

 Summ 15755

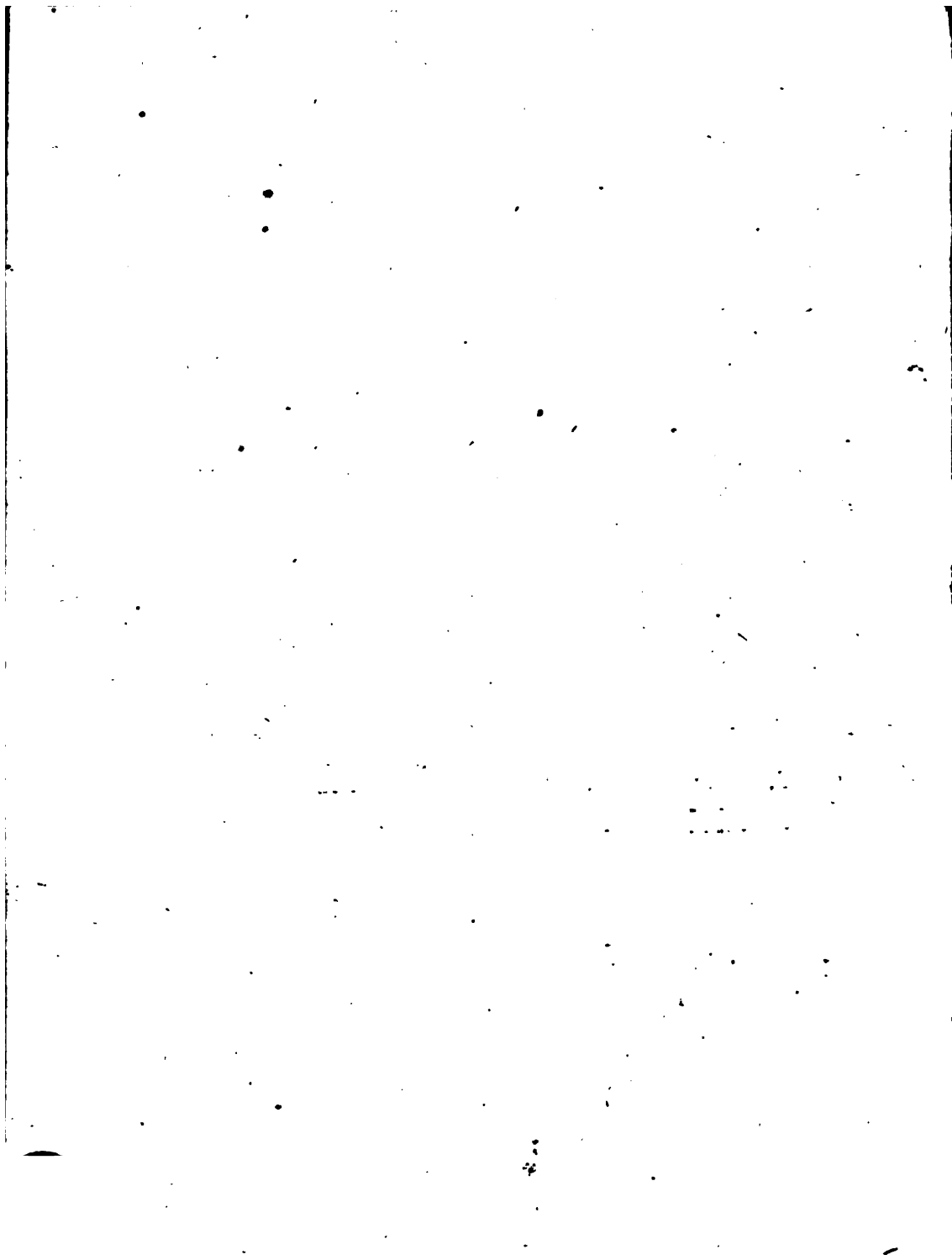
The Summ of the Figures in Unit's place is-- 15
 Of Ten's place is----- 140
 Of Hundred's place is----- 1600
 And of Thousand's place is----- 14000

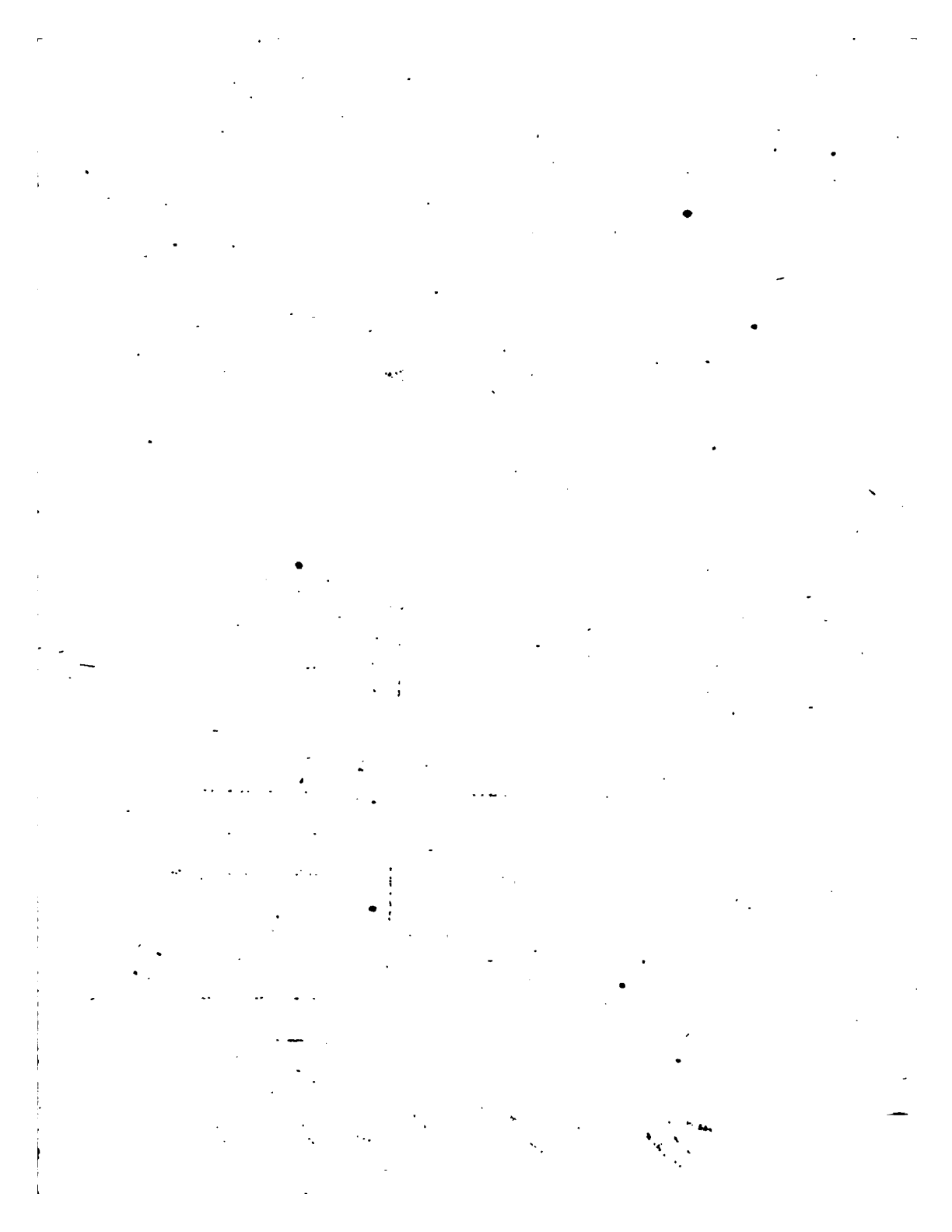
The Total of which is----- 15755
 Equal to the first Total.

Because Addition and Subtraction do prove each other, I shall shew the Proof of Addition after Subtraction, which followeth.

E

Sub-





Chap: 3.

Subtraction

Teacheth
to take a Lesser Number from a Greater and
to know it's Remainder

	(L)		(L)	(S)	(d)
Debit	7582094		457	09	07 $\frac{1}{4}$
Debit	6129762		126	16	10 $\frac{1}{2}$
Remains	<u>1452332</u>		<u>330</u>	12	08 $\frac{3}{4}$
Proof	7582094		<u>457</u>	09	07 $\frac{1}{4}$
Debit	5469387		602	11	08
Debit	2672052		74	19	10 $\frac{1}{2}$
Rest	_____		_____		_____
Proof	_____		_____		_____
Debit	1020060		894	00	01 $\frac{1}{2}$
Debit	40709		<u>372</u>	14	09 $\frac{3}{4}$
Balance	_____		_____		_____
Proof	_____		_____		_____



Subtraction is either,

1. Of Numbers of one Denomination: Or,
2. Of divers Denominations, and is the Converse of Addition:

S. 1. When you have placed the Numbers in Order, the lesser under the greater, as is usual, unless it may, as sometimes it does (by having the lesser Number uppermost) save the trouble of removing a Number; this is the

Rule] Having drawn a Line under the Numbers given, begin with the Digit standing in Unit's place, of the Number to be subtracted, and taken from the Figure possessing the like place of the greater Number; placing the Excess or Difference under the line, doing in like manner with all the rest. But if the Figure in the lesser Number be greater than the Figure possessing the like place in the greater Number; then you must add 10 to the said lesser Figure, and so proceed to take the said greater Number from the Summ, placing the Remainder under the line; and because the 10 borrowed was supposed to be taken from the next Figure toward the Left-hand, therefore add one to that Figure, and so proceed to subtract, as in the former placing the Excess under the line, as before.

Example.] Admit I have laid out Cash, the Summ of 4579 pounds, out of 6947 pounds, which I had in Bank, what Summ remains yet in my hands?

The Numbers being placed, take 9 the Units-
 place of the lower line from 7, in the like place in
 the upper line; but because you cannot, borrow 10
 from the 70, which stands in the Ten's place, and
 add to the 7 which stands in the upper line, making
 it 17; 9 from 17 will leave 8: which put under
 the line, and say, 1 (that is 1 Ten) I borrowed and 7 is 8, from 4
 and 10 you borrowed as before, that is from 14, leaves 6; which
 place under the line, saying, 1 you borrowed and 5 is 6, from 9
 leaves 3, and 4 from 6 leaves 2; which being put under the line,
 there will appear to remain in my hands 2368

$$\begin{array}{r} 1, \\ 6947 \\ 4579 \\ \hline \end{array}$$

Remains 2368

In like manner, in the first Example foregoing, if you take
 6129762 Hundred from 7582094, there will remain 1452332 ;

28 Subtraction of whole Numbers.

for 2 from 4, and there rests 2; 6 from 9, rests 3; 7 from 10, (which I borrowed) rests 3; 1 borrowed and 9, is 10, from 12 rests 2; 1 borrowed and 2 is 3, from 8 rests 5; 1 from 5, rests 4; and 6 from 7, and there resteth 1; so the difference between the Numbers given is 1452332.

S. 2. How to subtract Numbers of divers Denominations.

In the first Example foregoing of Pounds, Shillings, Pence and Farthings, you have 126 l. 16 s. 10^d. to deduct from 457 l. 9 s. 7^d. To perform which, begin with the farthings; saying, 2 from 1, you cannot; but 2 from 4 farthings (or 1 Penny which you borrow from the pence) and the 1 farthing in the upper line, that is, from 5, and the remainder is 3 farthings; which put under the line as you see, saying, 1 I borrowed and 10 pence is 11 pence, from 7 pence you cannot, but from 19 (borrowing 1 shilling or 12 pence from the shillings, and adding to the 7) and the remainder is 8 pence; which put under the line, and say, 1 shilling you borrowed and 16 shillings is 17 from 29 shillings (borrowing 20 shillings or 1 pound from the pounds, and adding to the 9 in the upper line) and there resteth 12 shillings, which place under the line, and say, 1 pound you borrowed and 6 (in the pound's place) is 7, from 7, leaveth (0), put (0) under the Unit's place of pounds, and say, 2 from 5, and there resteth 3; and 1 from 4, and there remains 3: so the Remainder is 330 l. 12 s. 8^d.

More Examples follow.

	C.	S ^s .	D ^s
Bought Cotton Wool _____	131	1	20
Sold out _____	92	3	27
Remains _____	38	8	21

	lb.	s.	p ^w .	gr.
Bought Silver, Weight _____	19	00	09	14

	lb.	s.	p ^w .	gr.	
Sold out at one time — 4	10	16	00	00	} In all — 17
At another time — 12	09	04	16	00	

Resteth unfold _____ 1 04 08 22

£. 3. 4

§. 3. A Second Way of Subtraction.

I think it a much better way, when any thing is borrowed, to add to the Figure in the Number from whence you subtract, in case 'tis too little : To take what is borrowed from the Figure standing next towards the Left-hand of the Figure that is too little, and suppose the Figure from whence you borrow to be so much less : So will you never need to pay what was borrowed, as is before taught.

E X A M P L E.

<p>Here, instead of saying 4 from 11 rests 7, and 1 borrowed and 8 is 9, from 12 rests 3 : It will be much less trouble to suppose the 10 borrowed to be actually taken from the 2 as it really is, and so the rest of the Figures : so must you say 4 from 11 rests 7, 8 from 11 rests 3 ; 1 from 8 rests 7, 9 from 17 rests 8, 2 from 2 rests 0. This way of Subtraction is much more natural and reasonable than the former, or common way ; but the Learner may use which he pleaseth : though I doubt not, but were this way as much practised as the former, it would be found much better.</p>	<table border="0"> <tr> <td style="padding-right: 10px;">From</td> <td style="text-align: right;">37921</td> </tr> <tr> <td style="padding-right: 10px;">Take</td> <td style="text-align: right;">29184</td> </tr> <tr> <td></td> <td style="text-align: right; border-top: 1px solid black;">8737</td> </tr> <tr> <td style="padding-right: 10px;">Difference</td> <td style="text-align: right;">8737</td> </tr> </table>	From	37921	Take	29184		8737	Difference	8737
From	37921								
Take	29184								
	8737								
Difference	8737								

§. 4. The Reason and Demonstration of Subtraction.

From the Axiom aforesaid of the whole, being equal to all its parts taken together, we may demonstrate (or undeniably prove) the Premises : For the Number from whence we make Subtraction, is the whole ; and the Number to be subtracted, is part of that whole. Now if the part be taken from the whole, what remaining will be the true difference between the part and the whole ; for the whole containeth no more parts than the Summ made of the part taken away ; and the part remaining, and the part taken from the whole, is only so much less than the whole, as the part remaining : Therefore the part remaining is the true Excess or Difference between the whole and the part taken from it.

As to the reason of the Rule for Subtraction, I need say no more than what is above concerning the Second way of Subtraction, and what

30 *The Proof of Addition and Subtraction.*

what was said in the Reason of Addition, and what follows in the proving Subtraction.

§. 5. The Proof of Subtraction two ways.

The Demonstration foregoing is sufficient to prove the Truth of Subtraction: But because there was no Example, take these following.

The Summ of the Subtrahend and Remainer is equal to the Number given, from whence Subtraction is to be made: For instance:

$$\begin{array}{r} \text{From } 56742 \\ \text{Take } 39752 \\ \hline \text{Remains } 16990 \end{array} \left. \vphantom{\begin{array}{r} \text{From } 56742 \\ \text{Take } 39752 \\ \hline \text{Remains } 16990 \end{array}} \right\} \text{Add.}$$

Proof 56742 the Summ, equal to the Number, from whence Subtraction is to be made.

Or thus by Subtraction.

$$\begin{array}{r} \text{From the whole } 56742 \\ \text{Take the part } 39752 \\ \hline \end{array}$$

Remains 16990 Which deduct from the whole,

And there resteth the } 39752 for Proof.
part given to be deducted }

§. 6. The Proof of Addition two ways.

After you have taken the Summ of the Numbers given to be added, you may prove the Truth of the Summ by separating the said Numbers into two parts with a line, and the Sum of those parts will (if there be no Error) be equal to the Aggregate or Summ of all the Numbers given.

EXAM-

The Proof of Addition.

31

EXAMPLE.

l.	s.		l.	s.	
5762	4}	}	7182	17	}
397	12		The Summ of these parts		
1023	01				
8942	13	}	10543	01	}
1600	08		The Summ of these parts		
17725	18	The Total.			
		The Total of these is } equal to the first Total. }		17725	18 Proof.

Or thus by Subtraction.

The total Summ of the Numbers given is—	l.	s.
from which deduct the first Number—	17725	18
Remains —————	5762	4
from which deduct the second Number—	11963	14
Remains —————	397	12
from which deduct the third Number—	11566	02
Remains —————	1023	01
from which deduct the fourth Number —	10543	01
And there remains —————	8942	13
equal to the fifth Number —————	1600	08
	1600	08
Which proves the Work.		

A Multi-

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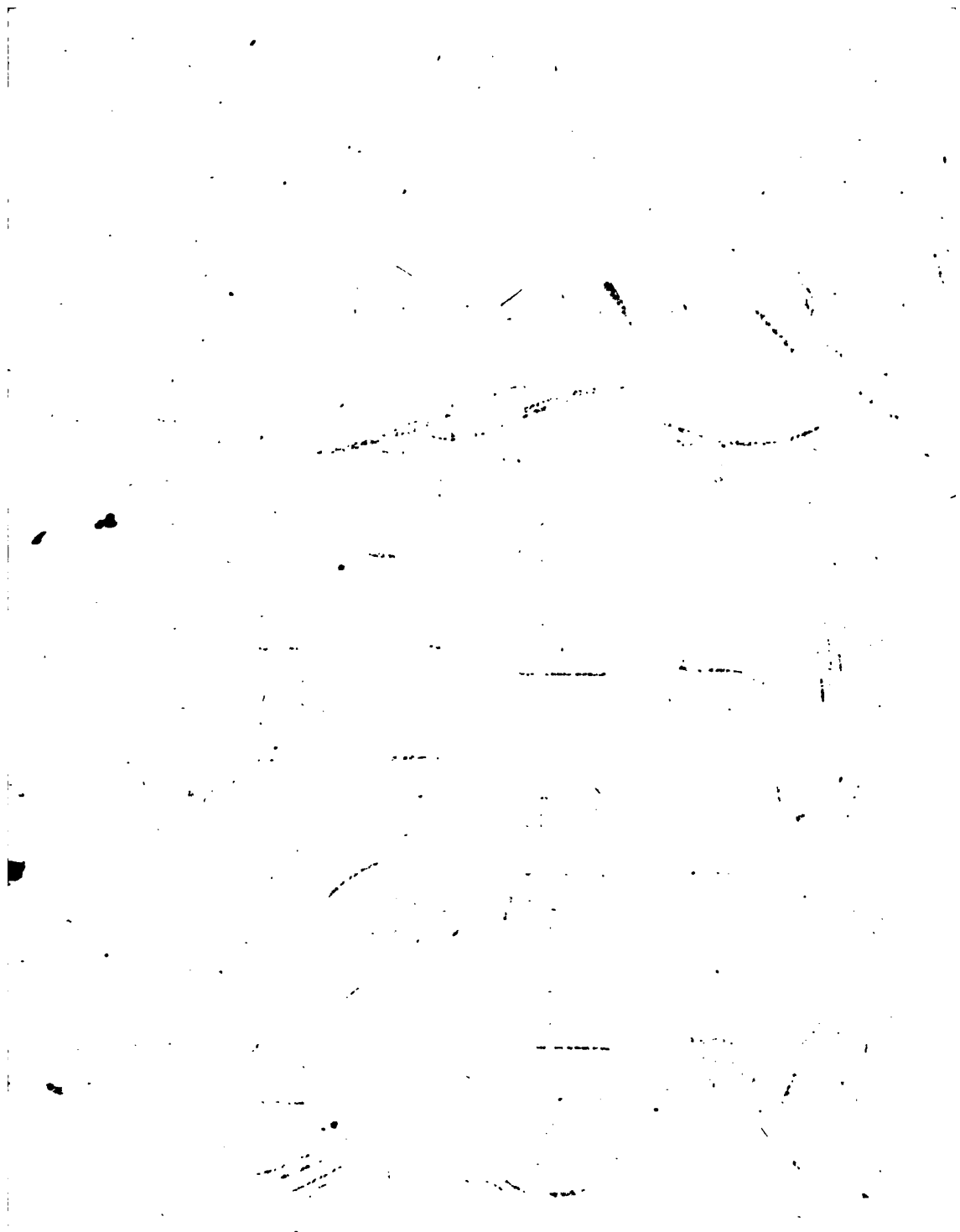
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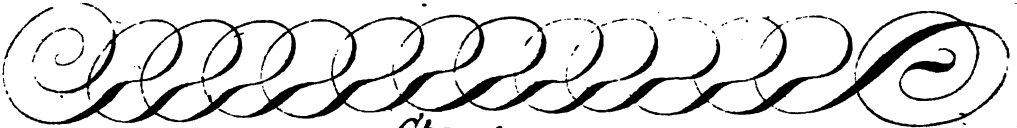
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Multiplication Table

3 Times

3	:	9
4	:	12
5	:	15
6	:	18
7	:	21
8	:	24
9	:	27

7 Times

7	:	49
8	:	56
9	:	63

8 Times

8	:	64
9	:	72

4 Times

4	:	16
5	:	20
6	:	24
7	:	28
8	:	32
9	:	36

9 Times

9	:	81
10	:	90
11	:	99

5 Times

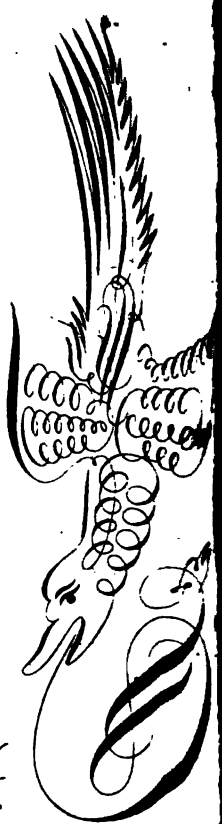
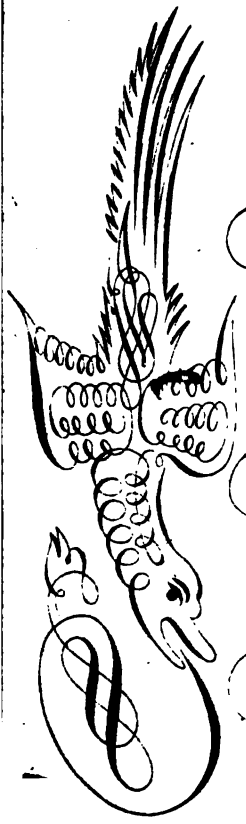
5	:	25
6	:	30
7	:	35
8	:	40
9	:	45

12 Times

2	:	24
3	:	36
4	:	48
5	:	60
6	:	72
7	:	84
8	:	96
9	:	108
10	:	120
11	:	132
12	:	144

6 Times

6	:	36
7	:	42
8	:	48
9	:	54



2. *A Brief Multiplication Table.*

Times	5	6	7	8	9
5	— 25	30	35	40	45
6	—	— 36	42	48	54
7	—	—	— 49	56	63
8	—	—	—	— 64	72
9	—	—	—	—	— 81

3. *The shortest Multiplication Table that has been invented.*

5, 4, 3, 2, 1. Two of these multiply respectively— (or square one Number.)
 6, 7, 8, 9. Numbers, whereof the Prod. of 2 is required (of the Squ. of one.)
 10, 20, 30, 40. Two of these, add respectively— (or double one Number.)

Example 1.] How many is 6 times 9? Under 6 (in the middle line) stands 10: under 9 is 40, the Summ of which is 50. And the 4 (which stands over 6) multiplied by the 1 (which stands over the given 9) is 4; to which add to the 50, the Product of 6 times 9 is 54.

Example 2.] 5 times 8 is 40; for 30 (under the 8 in the middle line) added to 10 (under 5) the Summ is 40. And 2 (over the given 5) multiplied by 2 (which is placed over the given 8) is 4, which added to the 40, the Summ is 44.

Example 3.] To square any of the middle Numbers (or multiply it by it self.)
 As suppose 8 times 8, double the Number under 8 (which is 60) and square that above 8 (which is 2 times 2, or 4) so the Answer is 64.

Note, It is reasonably supposed that any one can multiply 9 or any N° under that, by any of the 3 multiplying Digits under 6, without a Table. A little Practice makes this Table as easie to use as any, if not easier, there being so few Numbers to inspect.

Multipy

34 *Multiplication of whole Numbers.*

Multiplication is a Rule by which any Number may be so increased by multiplying it by another, as to produce a third Number, which shall bear such reason or proportion to either of the Numbers given, as the other does to a Unit.

The two Numbers given to be multiplied, are for shortness termed the Factors : Or,

The one (commonly the greater) is called the Multiplicand, and is that Number given to be multiplied.

The other is called the Multiplier, and is that Number by which the Multiplicand is multiplied.

The third Number, which is that produced by multiplying the two given Numbers together, is called the Product, or in Geometry it is called the Rectangle.

By this Rule is compendiously performed many Additions, As 4 times 80 is 320, which would require three Additions to know; as you see in the Margent.

Multiplicand 80 } Factors.
Multiplier 4 }

Product 320

80 }
80 } Add.
80 }
80 }

Multiplication is either Simple or Compound.

Simple when the Factors are both Digits: And,

Compound when the Factors are one or both mixt Numbers or Articles. 320 Summ.

[Before you go any farther, you must get the foregoing Tables by heart; which, supposing you have done, take the following Rules for working any Summ propounded.]

Case 1.] When the Product of each Figure in the Multiplicand, by the Multiplier is less than Ten, how to multiply by a Digit.

Rule.] Having placed the Factors, Units under Units, as in the Margent, multiply each Figure in the Multiplicand by the Multiplier, and place the several Products under the line, beginning with the Figure in Unit's place of the Multiplicand.

Example.] What comes 3214 pound of Tea to, at 2 pound per pound?

3214
2

Say, 2 times 4 is 8, which put under a line, as in the Margent; saying, 2 times 1 is 2, 2 times 2 is 4, and 2 times 3 is 6: to the Answer is, 6428 l.

Product l. 6428 Ans.

Case 2.]

Multiplication of whole Numbers. 35

Case 2.] When the Product of any of the Figures in the Multiplicand, by another in the Multiplier, is 10, or any Number of Ten's.

Rule] Put down in the General Product the Number of Units, that the Product of any 2 Figures in the Factors, are above 10, or any Number of Tens, and carry the said 10 or Tens to the Product of the next Figure, and so proceed till all the Figures in the Multiplicand are multiplied by the Multiplier.

Example.] What is the Price of 3484
Sacks of Cotton, at 9 pounds per Sack?

3484 } Factors.
 9 }

According to the Rule, say, 9 times 4 is 36: put the 6 under the line, and carry 3; saying, 9 times 8 is 72, and 3 I carry is 75:

put down the 5, and carry 7; saying, 9 times 4 is 36, and 7 is 43: put down 3, and carry 4; saying, 9 times 3 is 27, and 4 I carry is 31: which put all down: so will you find the Anf. 31356 l. as per Margin.

Case 3.] When the Factors are each above 10, how to find the Product.

Rule] Multiply the Figures in the Multiplicand by that standing in the Unit's place of the Multiplier, as before, and in like manner multiply the Multiplicand by the Figure standing in the Ten's place of the Multiplier: but you must place the Unit's place of the second Product under Ten's place of the first, and the other degrees in order; Ten's under Hundreds, Hundreds under Thousands of the first Product: which done, add the Products together, and the Aggregate or Summ is the General Product required.

Example.] What is the Price of 594
Ton of Iron, at 18 pound per Ton?

594 } Factors.
 18 }

Note, That if there had been 3 Figures in the Multiplier, when you were to multiply by that in Hundred's place; the first Figure of the Product must have been placed under the 9 in the lower of these Products: The following Examples will make it plain.

Example 2] What is the Value of 978
Hogheads of Sugar at 213 shillings per
Hoghead: See the Work by the Rules
above.

978
213

2934
978
20834

F 2

Answer 20834 shill.

36 Multiplication of whole Numbers.

Case 4.] When you have any Number of Cyphers towards the Right-hand of the Multiplicand and Multiplier, or either of them, Multiply by the significant Figures, and put the Cyphers toward the Right-hand of the Product.

Example 1.] Admit the Earth's Circumference is 360 Degrees, and that one Degree is 60 Miles, how many Miles is it round the Earth?

360 Degrees. } Factors.
60 Miles. }

Answer 21600 Product.

Example 2.] If in a Mile is 1000 Paces, how many Paces is 1000 Miles?

1000 } Factors.
1000 }

Answer 1000000 Product.

In this and the like Examples where the Multiplier is only a Unit with Cyphers, place those Cyphers to the Right hand of the Multiplicand, and you have the true Product; for 1 neither augmenteth nor diminisheth any Number by Multiplication nor Division, and is therefore by some said to be no Number; but 1 and 1 being 2, proves the contrary.

Case 5.] When Cyphers possess any other place than next the Right-hand of the Multiplier.

Rule.] When Cyphers stand in the middle of the Multiplier, you must place the Unit's place of the Product made of the Figure standing next the Cyphers toward the Left-hand, so many places forward as there are Cyphers in the said Middle, supplying their places with as many points; so will you not need to make so many lines of Cyphers, as many ignorantly do.

Example.] Multiply 3943200 } Factors.
by 750020 }

78846
78846
275961

2838534846000 Product.

Multiplication of whole Numbers. 37

§. 2. The Reason and Demonstration of Multiplication.

If two Lines (or Numbers) be given, and one of them be divided into any Number of Parts; the Product made of the two whole Lines (or Numbers) is equal to the Product made of the whole Line (or Number) and the several Parts of that divided. *Vid.* Euclid's *Elements*, Prop 1. Lib 2.

To instance in Numbers: If 346 were to be multiplied by 122, which 122 suppose divided into 3 parts, *viz.* 100, 20 and 2: I say, the Product made of 346 by 122, is equal to the Summ of the Products, *viz.* 346 by 100, 346 by 20, and 346 by 2; as followeth.

$\begin{array}{r} 346 \\ 100 \\ \hline \end{array}$	$\begin{array}{r} 346 \\ 20 \\ \hline \end{array}$	$\begin{array}{r} 346 \\ 2 \\ \hline \end{array}$
<p>1st. Product—34600</p> <p>2^d Product— 6920</p> <p>3^d. Product— 692</p>	<p>6920—2^d. Product</p>	<p>692—3^d. Prod.</p>

Summ—42212 The Product, equal to the Product of 346
by 122

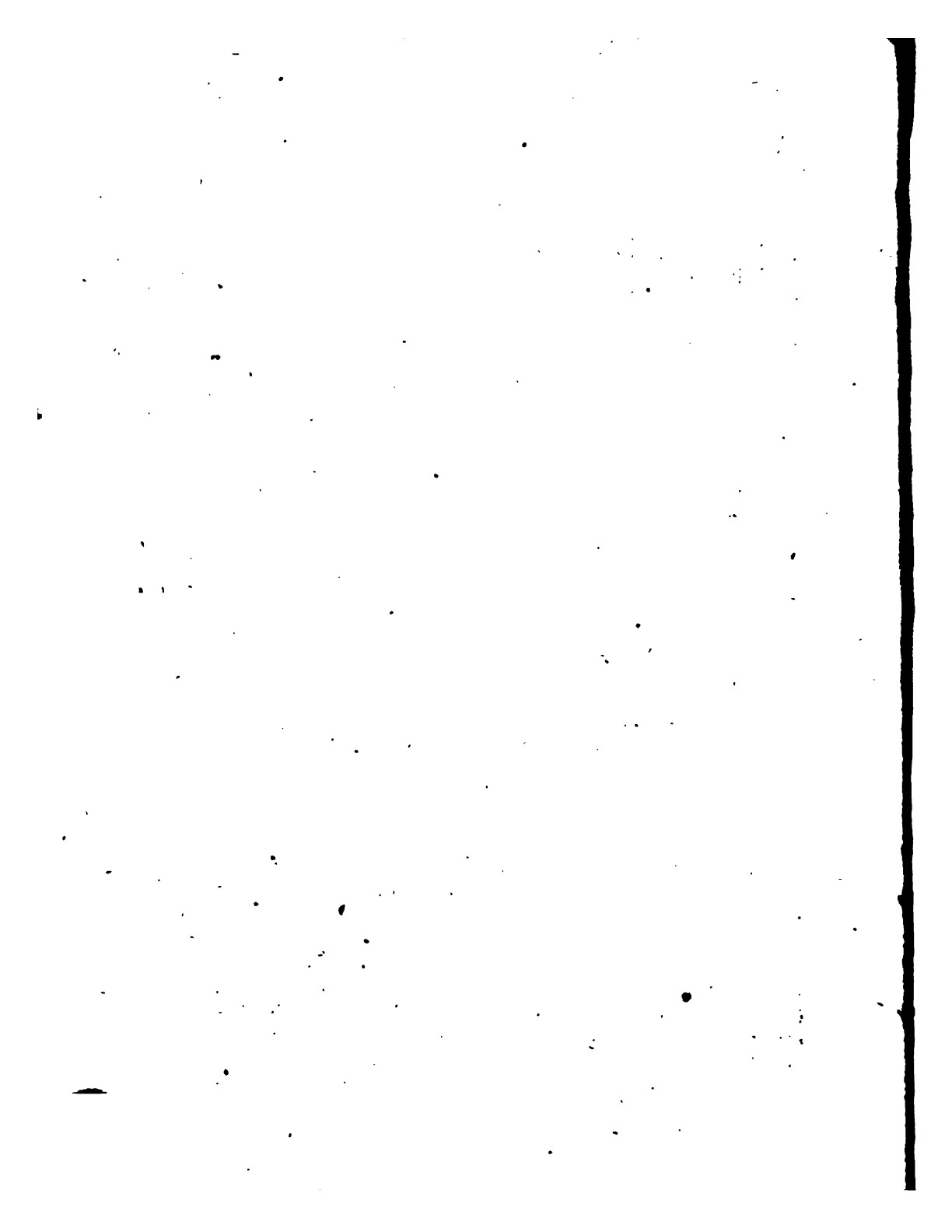
$$\begin{array}{r} 692 \\ 692 \\ 346 \\ \hline \end{array}$$

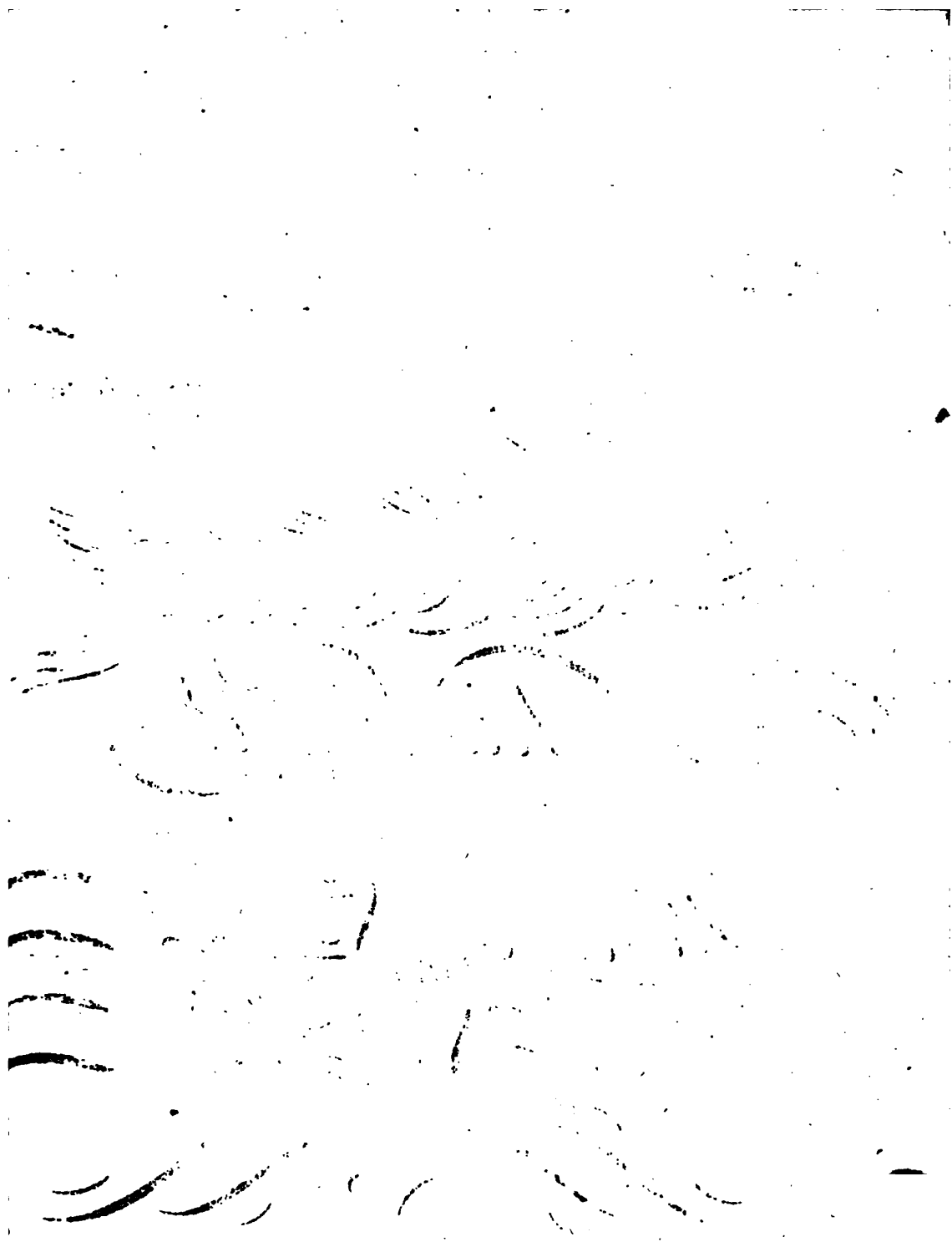
Viz. 42212.

For there being no more Units in 42212, than in the Products 34600, 6920, and 692; nor any more Units contained in the Products 34600, 6900, 692, but what is contained in the Product 42212; therefore the Products 34600, 6920, and 692, are equal to the Product 42212.

From hence also is the reason of placing the Units of the second Product, under the Tens of the first; Units of the third, under Tens of the second, &c. As in the Example; where 324 by 3, is 972; 324 by 20 (2 being in Ten's place) is 6480; and 324 by 100 (1 being in Hundred's place) is 32400; and if the 3 Cyphers be omitted (which 'tis most proper to do, since they make no Number, greater by Addition) the Numbers will stand as in ordinary Summs in this Rule: see the Margent.

$$\begin{array}{r} 324 \\ 123 \\ \hline 972 \\ 6480 \\ 32400 \\ \hline 39852 \\ \text{The} \end{array}$$







WILL teacheth
to Divide or Separate any Number or
Quantity into as many Parts as you please.



In this Rule

Observe
+ Find
THE
Dividend
Divisor
Quotient
Remainder



THE Dividend is the Number given to be divided.
 The Divisor is the Number by which the Dividend is divided.

The Quotient is the Number of times that the Divisor is contain'd in the Dividend.

The Remainder is the Number that may remain of the Dividend after the Divisor is had, as many times in it as is expressed in the Quotient; From whence it follows, that the Remainder must be always less than the Divisor, or otherwise the Divisor might be had oftener in it.

As Multiplication is a compendious way of Addition, so Division is the work of many Subtractions; for if 12 be divided by 4, the Quotient will be 3; for 4 may be taken 3 times out of 12.

$$\begin{array}{r}
 \text{Dividend} \\
 \text{Divisor } 4 \overline{) 12} \text{ Quotient} \\
 \hline
 0 \text{ Remainder}
 \end{array}$$

$$\begin{array}{r}
 1\text{st. From } 12 \\
 \text{Take } 4 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{Remains } 8 \\
 2\text{d. Take } 4 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 \text{Remains } 4 \\
 3\text{d. Take } 4 \\
 \hline
 0
 \end{array}$$

There are several ways that I could easily shew for the dividing one Number by another; but I shall only insert one, which is plainer than Cancelling, and shorter than the other ways commonly practis'd; and is therefore, in my opinion, the best.

Case 1.] To divide any Number by a Divisor, consisting but of one place.

Let it be required to divide 37642 by 7.

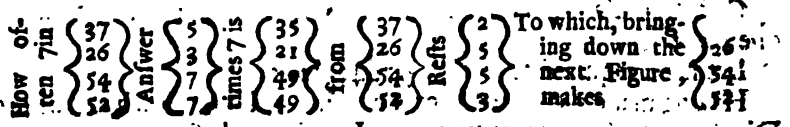
Having made a crooked (or any other) Line at each end of the Dividend, to separate it from the Divisor and Quotient, make a point or prick under 7 in the Dividend, (not under 3, because you cannot take the Divisor from the 3,) and say; how often is 7 (the Divisor)

40 *Division of whole Numbers.*

Divisor) contained in 37, the first Branch toward the Left-hand of the Dividend & the Answer is 5 times; which (5) put in the Quotient, and multiply the Divisor thereby; saying, 5 times 7 is 35; which deduct from the said 37, and put the Remainder (which is 2) under a Line; as in the Example:
 Then making a prick under the 6 (as a distinguishing Mark; that no Figure may be brought down twice) place it to the Right-hand the Remainder (2) and ask how often 7 is contained in 26? the Answer is 3 times; which put in the Quotient, as before, multiplying the Divisor thereby: As, 3 times 7 is 21, from 26, and there remains (5;) which put under the 6, drawing a Line between the 26, and the 5: Then make a prick under the next Figure towards the Right-hand, in the Dividend; *Viz.* under (4,) and place it to the Right-hand, the Remainder 5, making it 54, and ask how often the Divisor (7) can be had in 54? the Answer is 7 times; which put in the Quotient, and say, 7 times 7 is 49, from 54 and there rests (5;) which put under a Line, as before. Lastly, make a prick under the 2 in the Dividend, and place it to the Right-hand of the 5, and ask how often the Divisor (7) can be had in 52? the Answer is 7 times: which put in the Quotient, and multiply the Divisor thereby; saying, 7 times 7 is 49, which deduct from the 52, and the Remainder is 3; and you have no more Figures in the Dividend. So the Work is finished: and I find that. 5377, is one seventh part of 37642, and 3 over.

$$\begin{array}{r}
 7 \overline{) 37642} \\
 \underline{35} \\
 26 \\
 \underline{21} \\
 54 \\
 \underline{49} \\
 52 \\
 \underline{49} \\
 3 \text{ Remains.}
 \end{array}$$

The Rules for the last Operation, are thus contracted.



Exam

Division of whole Numbers.

41

Example 2.] By the foregoing Method is the Number following divided, viz. 917640 by 9.

Divisor 9)	Dividend	
	917640	(101960 Quotient.
	

	17	

	86	

	54	

	(00) Remains.	

Nota, That when the Divisor cannot be had in any part of the Dividend, that is brought down under a line: In such case you are to put a Cypher in the Quotient, and bring down the next Figure in the Dividend; as in the Example 9 cannot be had in (1,) therefore (0) is put in the Quotient, and 7 brought down, which makes the 1 to be 17, &c.

Case 2.] To divide any Number by a Divisor, consisting of 2, 3, or 4 places.

Rule.) It many times happeneth in dividing a Summ by 2, 3, &c. Figures; That though you can have the first Figure of the Divisor in the first of the Dividend, yet you cannot have the rest of the Figures of the Divisor in the like Number of Places of the Dividend; as if 316 be divided by 182, in this case 1 (the first of the Divisor) can be had 3 times in 3, (the first Figure in the Dividend,) but the rest of the Figures in the Divisor; viz. 82, cannot be had 3 times in 16 (the rest of the Figures in the Dividend,) therefore you must make trial whether the Divisor can be had one time less in the Dividend: As here; see if 182 can be had 2 times in 316, and multiplying in your mind, (or on some piece of Waste-paper) 182 by 2; which Product, if you find yet more than the Dividend 316, (as in this Example you will, and consequently cannot be deducted from it,) then take 182 but 1 time in 316, and put one in the Quotient. Take good notice of this, for it is the only difficult thing in Division; and that it may appear plain, take the Example following.

G

Let

Division of whole Numbers.

Let it be required to divide 75234 by 24.

To perform this:

1. Make a Point under 5, because you can deduct 24 from 75, otherwise the Point must have been made under the third Place.

2. Ask how often 2 can be had in 7?—the Answer is 3 times.

3. Before you put the 3 in the Quotient, make trial in your mind, if the Product of 24 (the Divisor) by 3, do not exceed 75, which you will find it does not.

4. Therefore put 3 in the Quotient, and say, 3 times 4 (the Unit's place of the Divisor) is 12, which deduct from 5, and 10 that you borrow (for you must always borrow so many Tens, as that the said Product of the Figure in the Quotient and Divisor may be deducted,) that is, from 15, and the Remainder is 3; which put under a Line, and carry the 1 Ten you borrowed in your mind; saying, 3 times 2 (in the Divisor) is 6, and 1 you borrowed is 7; from the 7 in the Dividend, and the Remainder is (0.)

5. To the Remainder (3) bring down the next Figure in the Dividend, which is 2:

24) 75234 (3134

6. Ask how often 2 can be had in 3? or how often 24 (your Divisor) can be had in 32? the Answer is 1.

Remains 32 Brought down.

7. Put 1 in the Quotient.

Remains 82 Brought down.

8. Multiply 24 (the Divisor) by 1; saying, 1 time 4 is 4 from 12 (borrowing 10) and there rests

Remains 111 Brought down.

8; which put under the line, saying, 1 time 2 is 2, and 1 borrowed is 3, from 3, and the Remainder is (0.)

19 Remainder.

9. To the Remainder 8, bring down the next Figure in the Dividend, which is 3, (always making a point under the Figure you bring under the line for the reason aforesaid) so have you 83; enquire therefore,

10. How often 2, the first Figure in the Divisor toward the Left hand can be had in 8? the Answer is 4 times: but if you make trial, you

you will find the Product of 24 by 4 to exceed 83; To that you can have but 24, 3 times in 83.

11. Put 3 therefore in the Quotient, as you see in the Example.

12. Multiply 24 the Divisor by 3; saying, 3 times 4 is 12, from 13 (borrowing 10 to add to the 3 last brought down) and there remains 1: which put under the line as you see; saying, 3 times 2 is 6, and 1 borrowed is 7, from 8, and there remains 1: which being in the Ten's place, makes Eleven.

13. To this 11 bring down the last Figure from the Left-hand in the Dividend, viz. (1) and you have 111.

14. Enquire how often 24 (the Divisor) can be had in 111, or how often 2 in 11, (because 111 is 1 place more than 24,) the Answer is but 4 times, for if you take it 5 times, you cannot deduct 5 times 24 from 111.

15. Multiply 24 the Divisor by the Figure you put in the Quotient, which is by 4; saying, 4 times 4 is 16, from 21, (borrowing 2 Tens to add to the 1 in Unit's place) and there rests 5, and carry 2, and 4 times 2 in the Divisor is 8, and 2 borrowed is 10, from 11 the last Remainder, and there remains 1. So the Work being finished, I find that 24 is contain'd in 75231, 3134 times; which I have made so plain (proceeding step by step) that any one, though of ordinary Capacity, may understand it; and by it any other of the like Nature, though the Divisor consists of never so many Figures: Take one other Example of this Case.

Let it be required to divide 319462 by 548?

$$548 \overline{) 319462} \quad (582$$

4546

1622

526 Remainder.

By the Rules foregoing, this last Operation will be performed as followeth, being contracted.

5 Times	8 is 40, from 44, rests <u>4</u>
4 is 20, & 4 is 24, from 29, rests—5	
5 is 25, & 2 is 27, from 31, rests—4	
	Remains 454: To which bring the 6, and enquire.
8 Times	8 is 64, from 66, rests <u>2</u>
4 is 32, & 6 is 38, from 44, rests—6	
5 is 40, & 4 is 44, from 45, rests—1	
	Remains 162: To which bring the 2, and enquire.
8 Times	8 is 16, from 22, rests <u>6</u>
4 is 8, & 2 is 10, from 12, rests—2	
5 is 10, & 1 is 11, from 16, rests—5	
	Remainder 526

How of { 3194 } Answer { 5 }
 ten 548 in { 4546 } { 8 }
 { 1622 } { 2 }

Case 3.] When Cyphers possess the first, second, third, &c. places of the Divisor, how to abbreviate the Work.

Rule.] As many Cyphers as you have in the Divisor (toward the Right-hand) so many Figures separate (toward the Right-hand of the Dividend) from the rest by a point or dash with the Pen, and divide the remaining Figures toward the Left-hand in the Dividend, by the significant Figures in the Divisor, leaving out the Cyphers: See the Operation following.

15629|00)

$$15629 \overline{) 1374281} 20 \text{ (87)}$$

123961

1455820 Remains to be divided into
1562900 parts, which will
be less than a Unit.

EXAMPLE 2.

$$197281 \overline{) 128} \text{ (26214506)}$$

51716241102350
1226004
423181
286190
889092
999683
122785
1227850
144164

128 Remains to be divided
into 197281000 Parts.

EXAMPLE 3.

$$1 \overline{) 36} 54 \text{ (36)}$$

54 Remains to be divided by 100.

Note, That when the Divisor is a Unit with Cyphers, as this last Example; then if you separate so many Figures from the Right-hand of the Dividend, as there are Cyphers toward the Right-hand in the Divisor (as was taught before) that part of the Dividend toward the Left-hand of the Dash is the Quotient, and that to the Right-hand is the Remainder: As in this Example, you see 36 is the Quotient, and 54 the Remainder: because when the Cyphers are cut off the Divisor, there remains only 1 to divide by; and it has been taught before, that no Number is made less by dividing by 1.

S. 2. *The manner of working Division explained, and the Reason of it shewed.*

The two great Difficulties that appear in Division, are,

1. That when a Number is to be divided by another, consisting of several Degrees or Places of Figures, it cannot be known without Trial, how often the Divisor can be had in the Dividend.

2. The subtracting the several Products made of the Quotient, and Divisor from the Left-hand of the Dividend, seems incoherent with the Rules of Subtraction, of deducting Unit's place from Units, Ten's place from Tens, &c.

To remove both which Difficulties, take the Example and Rules following, where the whole Work of Division is made plain and easie to be understood by a mean Capacity.

The Example I make use of shall be to divide 19467281 by 426.

The Work of Division Explain'd.

Products of the Divisor.		
by 1 = 426	19467281	(40000—First Quotient.
	<u>17040000</u>	
by 2 = 852	2427281	5000—Second Quotient.
by 3 = 1278	<u>2139000</u>	
by 4 = 1704	297281	600—Third Quotient.
by 5 = 2130	<u>255600</u>	
by 6 = 2556	41681	90—Fourth Quotient.
by 7 = 2982	<u>38340</u>	
by 8 = 3408	3341	7—Fifth Quotient.
by 9 = 3834	<u>2982</u>	
	(Rem. 359)	45697 The Summ of these Quotients, which is the true General Quotient.

In this Example,

1. I have made Products of the Divisor, multiplying it by the several Digits against which the said Products stand,

2. As is usual I prick under the 6 in the Dividend, because I can take the Divisor from the 4 first Figures towards the Left-hand of the Dividend.

3. I consider what place the first Figure in the Quotient toward the Left-hand will possess, which is always the same with the Figure, under which the first Point or Prick is made, and in this Example is Tens of Thousand's place; so that what Figure soever is first put in the Quotient, is so many Tens of Thousands.

4. I look in my 9 Products, which of them is next to, and less than the 4 first Figures to the Left-hand of the Dividend, and find the Product 1704 to be next; right against which, in the Series of Digits, stands 4; wherefore I put 4 in the Quotient, which is 40000, because (as was said in the last step) the Quotient will have 5 Places.

5. I multiply the said 1704 by 10000, because the 4 is in that place, or the Divisor by 40000, and the Product is 17040000, which (according to the true Rules of Subtraction) is to be taken from the whole Dividend, and the Remainder (as in the Example) is 2427281.

6. I look as before, which of the 9 Products is next to, and less than the 4 first places toward the Left-hand of my new Dividend 2427281 (because none of the Products can be had in 3 places,) and I find 2130: right against which stands the Digit 5, which must be 5000, because it is to stand in the Thousand's place of the Quotient, where having placed it, I multiply (as before) the 2130 by 1000, or the Divisor by 5000, and deduct the Product from the new Dividend 2427281, proceeding with the rest of the Figures till nothing, or a Number less than my Divisor remains: which done,

7. I sum up the 5 Quotients as in the Example, which make the General Quotient 45697; and so the Work is ended, and if the Cyphers in the Subtrahends be omitted, which shortens the Work, then will the Operations appear as in common Sums, which gives you the reason why Subtractions seem to be made from the wrong end of the Dividends: This may suffice to explain Division, which was never (to my knowledge) done by any one before.

§. 3. The Demonstration of Division.

The design of Division is to discover how often the Divisor is contained in the Dividend; whence it necessarily follows, That the Quotient contains 1, so often as the Dividend contains the Divisor. And if the Quotient contains Unity as often as the Dividend does the Divisor,

Divisor, it follows from the 5th Definition to the 5th Book of *Euclid's Elements*, That the Quotient is in proportion to 1, as the Dividend is to the Divisor; and consequently by the 16th of the 6th of *Euclid's Elements*, the Product of a true Quotient, multiplied by the Divisor, is equal to that of Unity by the Dividend; and all Quotients, having these Affections, are therefore true Quotients, and not otherwise.

Example] If 144 be divided by 6, the Quotient arising (by the foregoing Rules for Division) shall be 24.

For the Quotient 24 contains 1, so often as 144 contains 6, and consequently by the Definition above.

$$24. 1 :: 144. 6.$$

i. e. As 24 is in proportion to 1; so is 144 to 6.

And by the said 16 of the 6th *Euclid*.

$$24 \times 6 = 144 \times 1.$$

i. e. The Rectangle or Product of the 2 Extremes 24 by 6, is equal to that of the 2 mean or middle Numbers 144 by 1. So that 24 is the true Quotient of 144 by 6.

The Result of this Arithmetical Division is the same with the Geometrical. And is demonstrated by *Euclid* 44, 1, as is shewed by *Mr. Williams* and others in the Use thereof.

S. 4. The Proof of Division.

Division may be proved by dividing the Dividend by the Quotient, and the Quotient will be your former Divisor. Or, you may prove it (as is more usual) by Multiplication, for if you multiply the Quotient and the Divisor together, the Product will be equal to your Dividend.

To Instance in the Numbers following: If 1728 be divided by 12, the Quotient will be 144; and if, for proof, you divide 1728 by 144 the Quotient will be your former Divisor (12:) Or, if you multiply 144, the Quotient, by 12, the Product will be 1728: See the Work.

$$\begin{array}{l} 12) 1728 \quad (144 \text{ Quotient} \\ \dots \quad 12 \text{ Divisor} \end{array} \left. \vphantom{\begin{array}{l} 12) 1728 \\ \dots \end{array}} \right\} \text{Multiply}$$

$$\begin{array}{r} \hline 52 \quad 288 \\ \hline 48 \quad 144 \\ \hline 1728 \text{ The Dividend for proof.} \\ \hline \text{Rem. 0.} \end{array}$$

Or

Or thus by Division.
 144) 1728 (12 The former Divisor.

$$\begin{array}{r} \hline 288 \\ \hline \end{array}$$

o Rem.

§. 5. The Proof of Multiplication.

The only true way to prove Multiplication, is by Division, for if you divide the Product by either of the Factors, the Quotient will be the other.

Example.] In the Example of the second Case of this Chapter, 3484 being multiplied by 9, produceth 31356; And if 31356 be divided by 9 the one Factor, the Quotient is the other Factor; as in the Example.

9) 31356 (3484 Quotient.

$$\begin{array}{r} \hline 43 \\ \hline 75 \\ \hline 36 \\ \hline \end{array}$$

o Remains.

Some Authors have taught to prove Multiplication, by taking the Nines out of the Factors singly, and multiplying the Remainers together, and taking the Nines out of the Product, noting that Remainer; then taking the Nines out of the first Product, and if the Remainer be equal to the forementioned, they conclude the Work to be right; but that does not at all follow, for by this Rule you may prove a Thousand false Products as true ones.

Example.] Admit 3765 were to be multiplied by 58, the true Product is 218370; but if you suppose the Product 398370 (which is 180000 too much) or 245370 (which is 27000 too much) they will both prove right according to this Method; nor is there any other Method to prove Multiplication by, so true and concise as by Division; tho' 'tis indeed needless to prove every Summ you work, by any Method, provided you be careful in the Operation; or it may not be amiss if your Work is great, to run it over twice very carefully; and if you find both times agree, 'tis to be supposed your Work is right.

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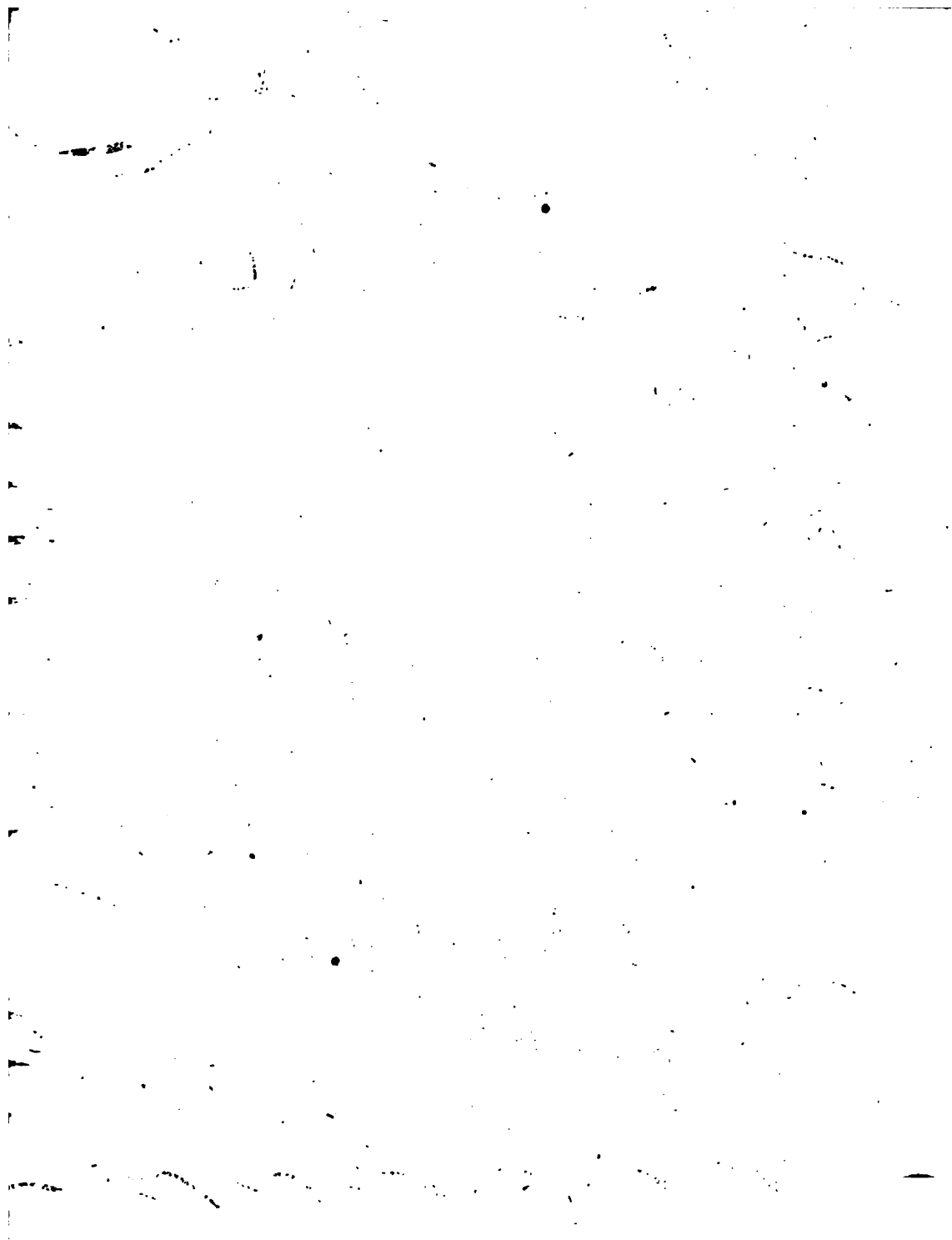
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Reduction

Is a Rule Consisting of two Parts viz.
 The Reducing of a Number from a greater to a
 lesser Denomination, as pounds into Shillings,
 Hundreds into Pounds, Yards into Feet, &c. which
 is called Reduction Descending and is performed by

Multiplication

The Reducing of a Number from a lesser to a greater
 Name, or Denomination, as Feet into Yards, Gallons
 into Barrells, Farthings into Pounds, &c. which is
 called Reduction Ascending & is performed by

Division

So that all Questions in Reduction are resolved
 either by Multiplication or Division or both,
 which shall be further Explained by the Questions following.



Sec. 2.

Case 1.] **W**hen a Number of one Denomination is given to be reduced into a lesser Denomination.

Rule.] Multiply the given Number by so many Units of the inferior Denomination into which you would have the Number given reduced, as are contained in a Unit of the Denomination which is given, and the Product is the Answer.

Example 1.] In 476 Pounds, how many Farthings?

476 Pounds	}	Multiply
960 The Farthings in 1		
<hr style="width: 100px; margin-left: 0;"/>		
2856		
4184		
<hr style="width: 100px; margin-left: 0;"/>		

456960 Farthings for Answer.

Example 2.] In 87 Hundred Weight, how many Pounds?

87 Hundred	}	Multiply
112 Pounds in one Hundred		
<hr style="width: 100px; margin-left: 0;"/>		
174		
87		
87		
<hr style="width: 100px; margin-left: 0;"/>		

9744 Pounds for Answer.

Example 3.] In 527 Ells Flemish, how many Quarters of a Yard, each Ell being three Quarters of a Yard?

527 Ells	}	Multiply
3 Quarters of a Yard in an Ell		
<hr style="width: 100px; margin-left: 0;"/>		
1581		

1581 Quarters of a Yard for Answer.

Example 4.] In 328 Bales of Dowlas, how many Pieces?

328 Bales	}	Multiply
3 Pieces in a Bale		
<hr style="width: 100px; margin-left: 0;"/>		
984		

984 Pieces for Answer.

Example 5.] In 484 Gros of Tape, each Gros 12 Dozen, each Dozen 2 Pieces, and each Piece 36 Yards, how many Yards?

484 Gros
12 Dozen in a Gros } Multiply

968
484

5808 Dozen in 484 Gros } Multiply
72 Yards in a Dozen

11616
40656

418176 Yards for Answer.

Case 2.] When it is required to reduce Numbers of divers Denominations into the lowest Denomination.

Rule.] Work as in the last Case; but if you have any Number of the next inferior Denomination to that you are reducing, add such Number to the Product.

Example 1.] In 364*l.* 5*s.* 5*d.* how many Pence?

l. *s.* *d.*
364: 05: 5:
20: The Shillings in a Pound } Multiply and add the 5*s.*

7285 Shillings in 364: 5: } Multiply and add the 5*d.*
12 Pence in a Shilling.

14579
7285

87425 Pence in 364: 05: 5: For Answer.

In the last Example in reducing the pounds, say, (0) time 4 (in the pounds) is (0) but 5 (in the shillings) is 5 shillings; then say, 2 times 4 is 8*o*. And when you come to the shillings, say, 2 times 5 shillings is 10, and 5 in the Pence place is 15 pence, put down 5, and

Reduction Descending.

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and carry 1, &c. Note, that if you had any thing in the Ten's place, either in the shillings; or pence, you must add them when you multiply by the Figure in the Ten's place of the Multiplier.

Example 2.] In 48*l.* 17*s.* 11*d.* 2*q.* how many Farthings?

	<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>q.</i>	
48:	17:	11:	2:		} Multiply and add 17 <i>s.</i>
20: The shillings in a pound					

	<i>l.</i>	<i>s.</i>			
977	Shillings in 48:	17:			} Multiply, adding the 11 <i>d.</i>
12 Pence in a shilling					

1955
978

	<i>l.</i>	<i>s.</i>	<i>d.</i>	
11735	Pence in 48:	17:	11:	} Multiply and add 2 <i>q.</i>
4 Farthings in a Penny				

46942 Farthings in 48: 17: 11*d.* For Answer.

Example 3.] In 47*C.* 2*Qrs.* 24*lb.* how many Pounds?

	<i>C.</i>	<i>Q.</i>	<i>lb.</i>	
47:	2:	24:		} Multiply and add the 2 <i>Qrs.</i>
4 Quarters is 112 <i>lb.</i>				

	<i>C.</i>	<i>Q.</i>		
190	Quarter in 47:	2:		} Multiply and add the 24 <i>lb.</i>
28 Pound in 1 <i>Q.</i> of <i>C.</i>				

1524
382

	<i>C.</i>	<i>Q.</i>	<i>lb.</i>	
5344	Pounds in 47:	2:	24:	For Answer.

This Question is more briefly resolved, as in the Margent, by first putting down your 47 *C.* 4 times, and the 2 *Q.* 24 *lb.* which is 80 *lb.* in Ten's and Unit's place, so the Summ is the Answer.

5344 *lb.* Answer.

4. 3. Re-

§. 3. Reduction Ascending.

To reduce Numbers from a lesser to a greater Denomination.

Case 1.] When the Number given is to be reduced to the next superiour Denomination.

Rule.] Divide the said given Number by such a Number of Units of the Denomination given, as makes a Unit of the next superiour Denomination, and the Quotient is the Answer.

Example 1.] In 984 Pieces of Dowlas, how many Bales, each 3 Pieces? See the Operation.

3) 984 (328 Bales for Answer.

$$\begin{array}{r} \hline 8 \\ \hline 24 \\ \hline 0 \end{array}$$

Example 2.] In 9744 Pounds, how many Hundreds?

112) 9744 (87 Hundred for Answer.

$$\begin{array}{r} \hline 784 \\ \hline 0 \end{array}$$

Case 2.] When a Number is to be reduced to a Denomination higher than the next superiour Denomination.

Rule.] Divide the given Number, as before, by such a Number of Units of the Denomination given, as makes a Unit of the next higher Denomination, and note the Remainder. Then divide that Quotient by so many Units of that Name or Denomination, which it is of, as makes a Unit of the next higher Denomination to the said Quotient, &c. noting the Remainders, as in the Examples following.

Example

Reduction Ascending.

Example 1.] In 87425 Pence, how many Shillings and Pounds?

$$\begin{array}{r}
 \begin{array}{r}
 \text{d.} \quad \text{s.} \quad \text{l.} \\
 12) \ 87425 \ (728|5 \ (364 \\
 \dots 2|0) \dots \\
 \hline
 34 \quad 12 \\
 \hline
 102 \quad 8 \text{ Answer } 364; \ 05; \ 05: \\
 \hline
 63 \quad 05 \text{ s. Rem.} \\
 \hline
 5 \text{ d. Remains.}
 \end{array}
 \end{array}$$

Example 2.] In 5344 lb, how many Quarters, and Hundreds?

$$\begin{array}{r}
 \begin{array}{r}
 \text{lb.} \quad \text{Q.} \quad \text{C.} \\
 28) \ 5344 \ (190 \ (47 \\
 \dots 4) \dots \\
 \hline
 254 \quad 30 \\
 \hline
 \text{Rem. (lb. 24} \quad 2 \text{ Quarters remains.}
 \end{array}
 \end{array}$$

C. Q. lb.
Answer 47: 2: 24

Example 3.] In 418176 Yards, how many Grofs of Tapes?
Divide the given Number by 72, and that Quotient by 12, for
Answer; because 72 Yards is 1 Dozen, and 12 Dozen 1 Grofs.

$$\begin{array}{r}
 \begin{array}{r}
 \text{Yards} \quad \text{Dozens} \\
 72) \ 418176 \ (5808 \ (484 \text{ Grofs. for Answer.} \\
 \dots 12) \\
 \hline
 581 \quad 100 \\
 \hline
 576 \quad 48 \\
 \hline
 0 \text{ Rem. } 0 \text{ Rem.}
 \end{array}
 \end{array}$$

These Questions are the Converse of those in Reduction Descending, and may serve for the Proof of them; and likewise to show the Learner the Nature and Effects of the Rules.

§ 4 Reduction Ascending and Descending.

§. 4. Reduction Ascending and Descending.

Questions performed by Multiplication and Division, are these that follow; and such like.

Example 1.] In 874 Ells Flemish, how many Ells English?

Multiply the given Number by 3, and divide the Product by 5, and the Quotient is the Answer.

874 Ells Flemish
3 Quarters of a Yard in 1 Ell } Multiply

5) 2622 (524½ Ells English for Answer.

12	874	6
22	Ans. 524¼ or ½ or ⅓	

2 Rem. Which placed over the Divisor, is ⅓.

Or Multiply by 6, and Divide by 10; which is more brief.

Note. That the Remainder is always of the same Denomination with the Dividend.

Example 2.] In 46 C. of Cotton Wool, how many Pounds, and what the Price, at 15 d. a Pound? Answer 322 l.

46 C.	12)	57280	(6440	(322
46		52	4	
46		48	4	
5152 Pound	} Multiply.	Remains 0 0 Rem.		
15 Pence for 1 Pound	}			
25760				
5152				

7150 Pence for Answer: which reduce into Pounds as before taught, and give Margin.

Example

Reduction Ascending and Descending. 57

Example 3.] In 846 Dollars, each 4s. 6d. how many Pounds Sterling?

846 Dollars	}	Multiply
54 Pence per Dollar		

3384		
4230		

12) 45684d.	s.	l.
..... 210)	380	7

96	18	

84	07	Remains.

o Remains.

Example 4.] To reduce Flemish Money into English:

In 465 l. 13 s. 4 d. *Flemish*, how many pounds Sterling, at 33 s. 4 d. *Flemish*, for 1 pound Sterling? Ans. 279 l. 8 s. Sterling.

Rule.] Divide the pence in 465 l. 13 s. 4 d. by the pence, in 33 s. 4 d. and the Quotient is the Answer. See the Work.

s.	d.	
33	4	465 13 4
12		20

400		9313 Skill. Flem.
		12

400)	1117	60 (279 l. Sterl.
	

	31	

	37	

	160 l. Sterl. rem.	}
	20	

400)	2200	(8 s. Sterl.
	

	o	

I

Thus

58 Reduction Ascending and Descending.

Thus you may reduce Flemish Money into English; let the price of a pound Sterling be reckoned any other Number of shillings, or shillings and pence Flemish; but when the price is as above (which is the true Value) you may perform the same by Multiplying the given Number by 3, and Dividing the Product by 5; for 400 Flemish pence is to 240 Sterling pence, or as 5 is to 3

l.	s.	d.	
465	13	4	<i>Flem.</i>
		3	

5)	1397	00	00

	279	08	00

Sterl. 279 : 08 : 00 Ans.

Note, That French Livers, Soulze and Deniers are reduced into Deniers (or Pence) as the English and Dutch Money is, by Multiplying by 20 and 12.

Example 5.] In 364 French Crowns, each 54 $\frac{1}{4}$ d. Sterling, how many pounds, shillings and pence Sterling?

Rule.] Multiply the given Crowns by 54d. and the Product is 19656d. to which add $\frac{1}{4}$ of 364 for the farthing, and the Summ is 19747d. or 82l. 5s. 7d. Sterling for Answer. But you will find a briefest way of performing these and such-like Questions by the Rules of Practice, which will be of great use in Casting up French Bills of Exchange.

Example 6.] In 1500 Pieces of Eight Mexico, each 52 $\frac{1}{2}$ d. Sterling, how many pounds Sterling?

Rule.] Multiply the 1500 by 52, and the Product is 78000 pence, then for the $\frac{1}{2}$ multiply the 1500 by 3, and divide the Product by 8, and the Quotient is 562 $\frac{1}{2}$ d. which add to the 78000d. and you have the Answer 78562 $\frac{1}{2}$ d. Sterling, or 327l. 6s. 10 $\frac{1}{2}$ d. And this Rule is very useful in Casting up Bills of Exchange to Cadix, Leghorn and Genoa: but may be something more briefly performed, as may all the rest, by Decimals, or the Rules of Practice.

Example 7.] In 2900 Ducats, each 51 $\frac{1}{2}$ d. Sterling, how many pounds, shillings and pence Sterling?

Rule.] Multiply 2900 by 51, and the Product is 147900: Then multiply 2900 by 7, and divide the Product by 8, and the Quotient is 2537 $\frac{1}{2}$ d. which added to the 147900, the Summ is 150437 $\frac{1}{2}$ d. Sterling, or 626l. 16s. 5 $\frac{1}{2}$ d. This Example you will find useful in Casting up Exchanges to Venice.

Example

Reduction Ascending and Descending. 39

Example 8.] In 2000 Millrees, each 6 s. 8¹/₂ d. how many pounds Sterling?

Rule.] Divide 2000 by 3, (because 3 six Shillings and eight Pence make one pound Sterling) and the Quotient is pounds; to which add the pounds in 2000 half-pence, as 4 l. 3 s. 4 d. to 666 l. 13 s. 4 d. and the Summ is 670 l. 16 s. 8 d. for Answer; which Rule is useful in Casting up Bills of Exchange from *Oporto*, or *Lisbon* in *Portugal*. But if the Price of a Millree, in the Course of Exchange, be reckoned any other Number of Shillings and Pence, you may work either by the Rules of Practice following, or reduce the Value of a Millree into its lowest Denomination, and reduce the Product of the Millrees thereby, into Pounds.

Example 9.] In 758 Guilders 18 Stivers, how many pounds Sterling at the Rate of 33 s. 10 d. Flemish per pound Sterling?

Rule.] Reduce the Guilders and Stivers into Stivers: Then reduce the Flemish Shillings and Pence into Stivers, by multiplying by 6 the Stivers in a Shilling Flemish, and adding 5 for the 10 pence (there being 2 pence Flemish in 1 Stiver) and then divide as in the Work following.

Note, That if the Pence in the Exchange had been an odd Number, (as the 10 had been 9) then multiply 33 by 12, and add the 09, which reduces the 33 : 09 into Flemish pence, viz. 405; and then you must in this Case double 15178, and so divide 30356 by 405.

Note, This is a useful Example to such as Trade to *Holland*, where Accounts are kept in Guilders and Stivers, but the Exchange is in Flemish Shillings and Pence.

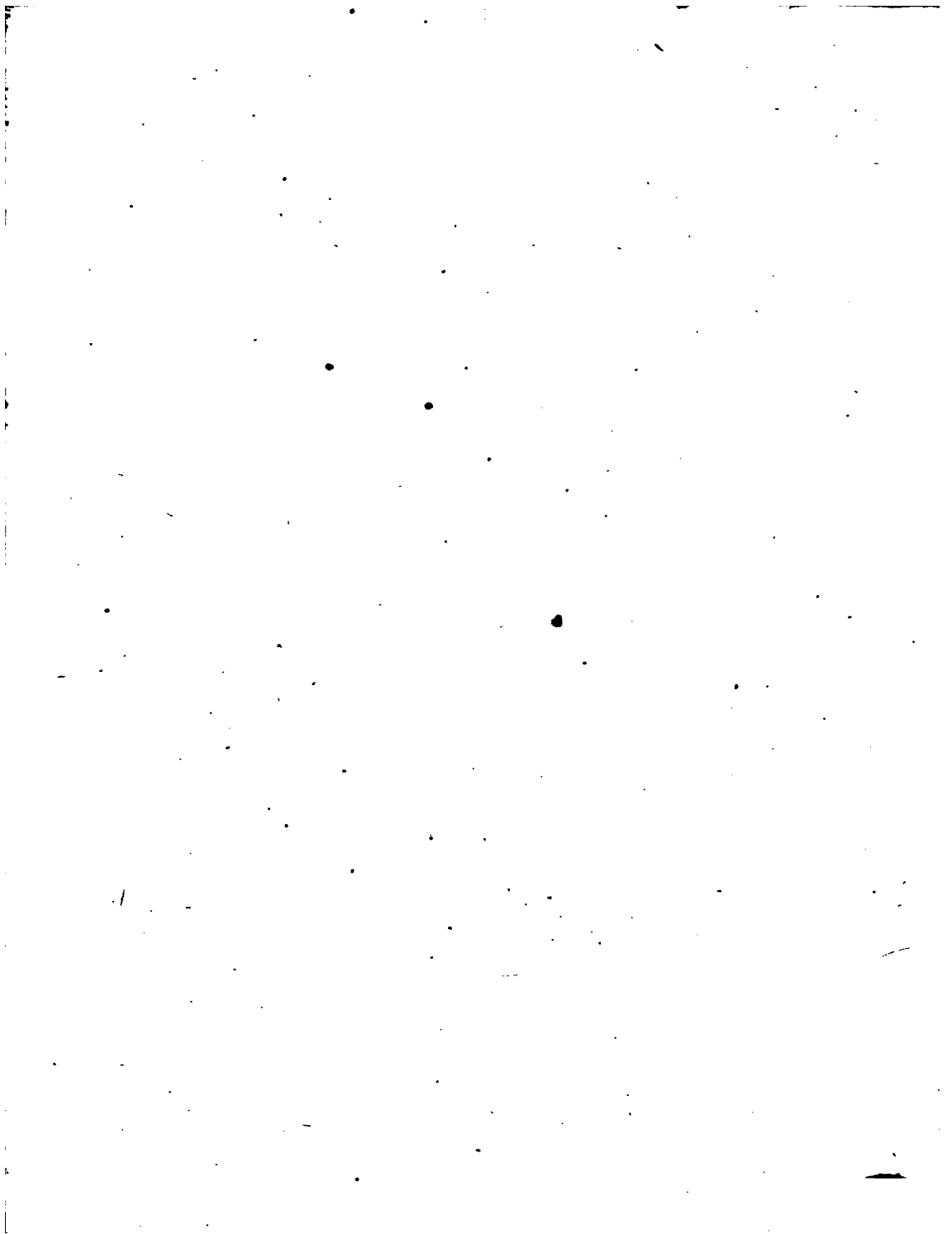
See the Operation following:

60 *Reduction Ascending and Descending.*

	G. Sti.
33 s. 10 d. Flemish	758: 18
6 Stivers per Shill. Flem.	20
203 Stivers.	15178 Stivers. (74 l. Sterling.)
	968
	156 re ^l . Pounds Eng ^l .
	20
	103) 3120 (15 Shill. Sterl.)
	1090
	75 Shill. rem.
	12
	203) 900 (4 Pence Sterl.)
	88 re ^l s d. s.
	4
	203) 352 (1 Farthing.)
	149

So the Answer is 74 15 4 $1\frac{12}{103}$

ALL



The Golden Rule

It is so called from its extraordinary usefulness, not only in Arithmetical Questions, but in all parts of y^e Mathematicks.

It is also called The Rule of Three, because there is alwayes Three Numbers given to find out a Fourth, and it is properly called The Rule of Proportion, because y^e first Number beares such Proportion to y^e second, as y^e third does to the fourth.

The designe of this Rule is to shew how to find a fourth Proportional Number by having three given Numbers, which is deducible from y^e 16th prop: of y^e sixth Booke of Euclid's Elements. **THE RULE IS**

Multiply the 2^d & 3^d Numbers together, & divide y^e Product by the first Number, and the Quotient thence arising is the 4th Number sought: or

Divide the 2^d Number by the 1st, and Multiply the Quotient by the 3^d, and the Product is the Number required. For y^e 4th Number containes the 3^d so often as the 2^d containes the 1st, and this is called Direct Proportion.



Chap. 7. *The Single Rule of Direct Proportion.* 61

ALL the Difficulties in this Rule, consisteth in the right stating the three Numbers given: for when you have done that, you have only Multiplication and Division, and the Work is performed: The Rule therefore for stating any Question in this kind of proportion is,

Rule.] Consider that of the three Numbers given, you have always two of one Denomination: And,

That Number which is of another Denomination, must be always put in the second place: and to the Left-hand thereof must be placed that Number (of the two of one Denomination) on which the second has dependance, and the other Number must be placed next the Right-hand. As supposing it were required to know what the Interest of 75 pounds is at the rate of 8 Pound *per Cent. per Annum*, the Numbers will be stated thus:

$$\begin{array}{ccc} L. prin. & L. int. & L. prin. \\ 100. & 8 :: & 75. \end{array}$$

In this Example there are two Numbers that are Principal Money, and one that is Interest: therefore the Interest (according to the Rule) must stand in the Middle, or Second Place; the Principal on which the Interest dependeth, *viz.* 100 (8 l. being the Interest thereof) must stand in the first Place toward the Left-hand, and the other Principal on which the fourth Number (which is the Number sought for) dependeth, must possess the first Place toward the Right-hand.

By these Rules foregoing, you may with ease and certainty perform any Operation in Direct Proportion, and for your farther Information take the Examples following.

Example 1.] If the Interest of 100 l. for one Year be 8 l. what is the Interest of 75 Pound for the same time?

$$\begin{array}{ccc} L. P. & L. I. & L. P. \\ 100 : & 8 :: & 75 \\ & & 8 \\ \hline & & 600 \end{array} \quad (6 l. For Answer.)$$

Example

64 The Single Rule of Direct Proportion.

Note, That when you have multiplied the 2d and 3d Numbers together, and divided the Product by the 1st, the Quotient is of the same Denomination, as the 2d Number is; after you have reduced it (as in the last Example) into its lowest Denomination given.

Example 2.] If 4 C. i Q. 24 lb of Sugar cost 14 l. what will 18 C. cost?

C.	Q.	lb.	l.	C.	
4	1	24	14	18	
				18	
				18	
				18	
45				18	
500 lb. of Sugar				2016 lb. of Sugar	} Multiply
				14 l. Sterling	

$$\begin{array}{r} 8064 \\ 2016 \end{array}$$

$$5 \overline{) 100} \quad 28 \overline{) 24} \quad \begin{matrix} l. & s. & d. & q. \\ 56 & 8 & 11 & 2 \frac{2}{3} \end{matrix} \text{ Answer.}$$

$$\begin{array}{r} 32 \\ 224 \text{ Pound remains} \\ 20 \text{ Shillings in } 1 \text{ l.} \end{array} \quad \left. \vphantom{\begin{array}{r} 32 \\ 224 \\ 20 \end{array}} \right\} \text{ Multiply}$$

$$5 \overline{) 100} \quad 44 \overline{) 80} \quad (8 \text{ Shillings.})$$

$$\begin{array}{r} 480 \text{ Shillings rem.} \\ 12 \text{ Pence} \end{array} \quad \left. \vphantom{\begin{array}{r} 480 \\ 12 \end{array}} \right\} \text{ Multiply}$$

$$\begin{array}{r} 96 \\ 48 \\ 5 \overline{) 100} \quad 57 \overline{) 60} \quad (11 \text{ Pence.}) \end{array}$$

$$\begin{array}{r} 7 \\ 260 \text{ Pence rem.} \\ 4 \text{ Farthings} \end{array} \quad \left. \vphantom{\begin{array}{r} 7 \\ 260 \\ 4 \end{array}} \right\} \text{ Multiply}$$

$$5 \overline{) 100} \quad 10 \overline{) 40} \quad (2 \text{ Qrs})$$

40 Farthings remains to be divided by 500.

Note,

The Single Rule of Direct Proportion. 63

Note. That (as in the last Example) when any thing remains that is reducible to a lower Denomination; after it is so reduced, it must be divided continually by the first Number.

Case 2.] When any of the three Numbers given happen to be of divers Denominations.

Rule.] You may reduce them into the lowest Denomination: And if your first Number require to be reduced, your third must be reduced likewise into the same Denomination as the first: For the first and third Number, before you begin your Operation, must be always of one Name or Denomination.

Example 1.] If 17 Hogshheads of Sugar cost 320 *l.* 12 *s.* what will 5 of those Hogshheads be worth?

$$\begin{array}{r} \text{H-ds, } \text{ } \text{l. } \text{ } \text{s. } \text{ } \text{H-ds} \\ 17: 320: 12:: 5: \end{array}$$

$$\begin{array}{r} \text{6412 Shillings } \} \text{ Multiply} \\ \text{5: H-heads } \} \\ \hline 17) 32060 \text{ (18815 (94: 5: 10: 27:} \\ \dots 210 \end{array}$$

$$\begin{array}{r} 150 \quad 8 \\ \hline 146 \quad 0 \text{ Remains.} \end{array}$$

$$\begin{array}{r} 100 \end{array}$$

$$\begin{array}{r} 15 \text{ Shillings remains } \} \text{ Multiply} \\ 12 \text{ Pence in a shilling } \} \end{array}$$

$$\begin{array}{r} 30 \\ 15 \end{array}$$

$$17) 180 \text{ (12 Pence}$$

$$\begin{array}{r} 10 \text{ Pence remains } \} \text{ Multiply} \\ 4 \text{ Farthings } \} \end{array}$$

$$17) 40 \text{ (2 Farthings}$$

6 Farthings remains to be divided by 17.

Note.

66 The Single Rule of Direct Proportion.

Example 1.] If 40 Pieces of broad Cloth cost 390 l. what will one Piece cost?

$$\begin{array}{r}
 \text{Pieces.} \quad \text{l.} \quad \text{Piec.} \\
 40 : 390 :: 1 \\
 4 \overline{) 390} \quad (14 \text{ l. or } 14 \text{ l. } 15 \text{ s. Answer} \\
 \hline
 19
 \end{array}$$

3 Pounds remains.

Example 2.] If 14 Hogheads of Tobacco, prize Nett 9285 lb, cost 619 l. 10 s. what will one pound cost at that Rate?

$$\begin{array}{r}
 \text{lb.} \quad \text{l.} \quad \text{s.} \quad \text{f.} \quad \text{s.} \quad \text{d.} \quad \text{q.} \\
 9285 : 619 : 10 :: 1 \text{ lb.} \text{ Ans. } 1 : 4 : 0 \frac{40}{100} \\
 20
 \end{array}$$

$$\begin{array}{r}
 9285 \quad 12390 \text{ s. (1 Shilling.} \\
 \hline
 3105 \text{ Shillings rem.} \\
 12
 \end{array}$$

$$\begin{array}{r}
 9285 \quad 37360 \text{ d. (4 Pence.} \\
 \hline
 120 \text{ Pence remains.} \\
 4
 \end{array}$$

480 Farthings rem. to divide by 9285

§. 2. The Single Rule of Indirect Proportion.

Whereas in the former Section of Direct Proportion, the fourth Number was always proportionably greater than the Third, as the Second was greater than the First: in this kind of proportion, on the contrary, the greater the third Number is, the less is the Fourth, and the less the Third is, the greater is the Fourth; and it is therefore called Indirect or Reverse Proportion.

And whereas in the last Section the Product of the First and Fourth is equal to that of the Second and Third; in the proportion I am now treating of, the Product of the Third and Fourth is equal to that of the first and second Numbers; which may serve as a proof for both.

The

The Single Rule of Indirect Proportion. 67

The Method of stating any Question in this Proportion, is the same with Direct: but to find the Number required, this is the

Rule.] Multiply the first and second Numbers toward the Left-hand together, and divide the Product by the Third, and the Quotient arising is the Answer.

A Rule to know whether a Question proposed be to be answered by the Rule of Proportion, Direct or Indirect.

Having stated the three-Numbers given as is formerly directed, calling the middle Number the mean; and the two outmost Numbers, the extremes: Consider from the Nature of the Question, whether the third Number requires more or less than the second Number; if it requires more, the lesser Extream is to be your Divisor; but if the Third requires less, the greater Extream is your Divisor: Now so often as this lesser, and the greater Extream happeneth to be the third Number, or that next the Right-hand, so often is your Proportion Indirect: but when they are the first Number, the Proportion is Direct: an Example or two will make it plain.

Example 1.] If a Board be 9 Inches *In. br.* long. *In. br.* broad, how much in length will make a square Foot? Say, if 12 Inches broad require 12 in length, to make a square Foot, what length will 9 Inches broad require? It will require more length, because there is less breadth. See the Work.

$$\begin{array}{r}
 12 : 9 \\
 \hline
 9) 144 \text{ (16 Inches} \\
 \hline
 54 \text{ in length} \\
 \hline
 \text{for Anf.}
 \end{array}$$

Example 2.] How many Yards of Silk 3 Quarters broad, will line 9 Yards of broad Cloth, that is 1 and a half Yards broad?

Say, If 6 Quarters wide or broad require 9 Yards in length, what will 3 Quarters broad require in length?

$$\begin{array}{r}
 \text{Qrs. br.} \quad \text{Yds. long.} \quad \text{Qrs. br.} \\
 6 : 9 : 3 \\
 \hline
 6
 \end{array}$$

$$\begin{array}{r}
 3) 54 \text{ (18 Yards in length for Answer.} \\
 \hline
 24 \\
 \hline
 0
 \end{array}$$

68 The Double Rule of Direct Proportion.

Example 3.] If when the price of a Bushel of Wheat is 6 s. 3 d. the penny Loaf weigheth 9 $\frac{3}{4}$; what must the penny Loaf weigh, when the price of a Bushel of the same Wheat is 4 s. 6 d? The Question is thus stated,

s.	d.	s.	d.
6	3	9	4
12	:	12	6
75 Pence		54 Pence your Divisor	
9			
54) 675 (12 $\frac{3}{4}$.			

135

27 $\frac{3}{4}$ Remains } Multiply
20 Penny-weight }

54) 540 (10 Penny-weight.

0 Remains. Answer 1: 00: 10

S. 3. The Double Rule of Direct Proportion.

In this kind of proportion there are 5 Numbers given to find a sixth, which sixth will bear such proportion to the product made of the fourth and fifth Numbers, as the third Number does to the Product made of the first and second Numbers.

The Rule for stating the five Numbers given, is :

Make that the third Number from the Left-hand, which is of the same Denomination with the Number sought; then place the two Numbers in the first and second place to the Left-hand, which are conjunctive in the Sense of the Question to the Third, and the other two Numbers in such Order, that the Fourth may be of the same Denomination with the first, and the Fifth of the same with the Second: which done,

Rule.] Divide the Product of the three next the Right-hand, multiplied one in another, by the Product of the two next the Left-hand, and the Quotient is the sixth Number sought for.

Example

The Double Rule of Indirect Proportion. 69

Example.] If 100 *l.* in Twelve Months gain 6 *l.* what will 500 *l.* gain in Eight Months ?

<i>L. prin.</i>	<i>Month.</i>	<i>L. int.</i>	<i>L. prin.</i>	<i>Month.</i>
100 :	12 :	6	500 :	8
12			6	
Divisor — 1200			3000	
			8	
			24000 (20 Pound Answer.	
			00 Remains.	

By the Work you may perceive that 500 *l.* will gain 20 *l.* in 8 Months, at the Rate of 100 *l.* Principle, gaining 6 *l.* Interest in 12 Months.

This Question, or any other of this Nature, may be resolved at two single Rules of Proportion, thus : If 100 *l.* require 6 *l.* what will 500 *l.* require ? the Answer is 30 *l.* Then say, if 12 Months require 30 *l.* what will 8 Months require ? the Answer (as before) is 20 *l.*

§. 4. The Double Rule of Indirect Proportion.

The Rule for stating your Question.

Place the three first Numbers toward the Left-hand in the same Order you did in the last Section ; and for the other Two, place that the Fourth, which is of the same Denomination with your Second Number, and consequently the other next the Right-hand : So will your first and last, *viz.* that required be of one Denomination, your second and fourth of another, and your third and fifth of another. And,

The Rule for performing the Operation, is :

Divide the Product of the first, multiplied in the second, and that Product in the fifth, by the Product made of the third and fourth, and the Quotient is the Answer.

Exam-

70 The Double Rule of Indirect Proportion.

Example.] What Principal will raise 20*l.* in Eight Months at 6*per Cent. per Annum*?

<i>L. prin.</i>	<i>Month.</i>	<i>L. int.</i>	<i>Month.</i>	<i>L. int.</i>
100 :	12 :	6 :	8 :	20
12		8		
<hr/>				
1200		48 - Your Divisor.		
20				

L. prin.

48) 24000 (500 Quotient for Answer; which proves the last Operation.

0 Remains.

S. 5. The Reason and Demonstration of the Single Rule of Direct Proportion.

If 4 Numbers are Geometrically proportional, the Rectangle or Product made of the Means, is equal to that of the two Extremes from *Euclid. lib. 6. prop. 16.* from which I shall prove the Method for finding the fourth Proportional.

Example.] Admit 4 is in proportion to 12, as 18 is to a fourth Number unknown; for which put (*x*), they will stand thus;

$$4 \quad 12 :: 18. \quad x$$

i. e. As 4 is in proportion to 12, so is 18 to the unknown Number; then from the fore-mentioned Proposition,

$$4 \quad x = 216$$

i. e. Four times *x* (which represents the unknown Number) the Product of the first and fourth is equal to 12 times 18, *viz.* 216, the Product of the two Means: then it necessarily follows;

$$4 \quad x = 216$$

i. e. That (*x*) is equal to 216, divided by 4; for if 4 Times (*x*) is equal to 216, then one Time (*x*) must be equal to one fourth part of 216: And,

$$216 \div 4 = 54$$

4. Since (*x*) or the unknown Number, is equal to one fourth part of 216, and that $\frac{1}{4}$ part of 216 is equal to 54, therefore (*x*) is equal

The Demonstration of Single Direct Proportion. 71

equal to 54, which is the fourth Number sought; and if you compare the several Steps; you will find the fourth Number to be discovered after the same Method given for finding it, at the beginning of this Chapter, which is by multiplying the second and third Numbers together, and dividing the Product by the First.

Or thus, from this *Axiom*.

That the Fourth Number containeth the Third so often as the Second does the First.

Hence $\frac{1}{2} = \frac{n}{18}$ that is $\frac{1}{2}$ of 18 is equal to one 18th of (n).

Now $\frac{1}{2} = 3$ therefore $\frac{n}{18} = 3$.

i. e. Twelve divided by 4, is equal to 3; therefore n divided by 18 must be equal to 3.

And if $\frac{n}{18} = 3$ then $3 \times 18 = n$.

i. e. If n divided by 18 is equal to 3, then 3 times 18 must be equal to n , and consequently (n) is equal to 54, for 3 times 18 is 54, as before.

§. 6. The Demonstration of the Single Rule of Indirect Proportion.

By the Definition of this Rule in Section the second foregoing the Product of the first and second Numbers, is equal to that of the Third and Fourth: from whence this Demonstration.

$$6 : 9 : 3 : n.$$

Therefore by the Definition.

$$6 \times 9 = 3 \times n, \text{ or}$$

$$54 = 3 n,$$

i. e. The Rectangle of the two first Numbers 6 by 9, is equal to that of n by 3.

Now if $54 = 3 n$, $n = \frac{54}{3}$.

i. e. If 54 is equal to three Times (n), then it follows that one Time (n) is equal to one third part of 54:

$$\frac{54}{3} = 18 \text{ Therefore}$$

$$n = 18$$

i. e. One third of 54, being 18; therefore n is equal to 18, which was required.

B.

72 The Proof of the Rules of Proportion.

By the same Rules may the double Rules of Proportion be demonstrated; but this Book being chiefly designed for the practice of young Merchants; my intended brevity in things speculative requireth, that I pass forward to what is more practically Useful.

§: 7. The Proof of the Rules of Proportion.

Every kind of Proportion I have discoursed of, may have the Operations proved two Ways.

Case 1.] *Single Direct Proportion.*

When four Numbers are in a direct proportion, the Product made of the First and Fourth, is equal to that of the Second and Third; otherwise the Work is not rightly performed.

2dly. The second way is thus: As the fourth Number is to the Third, so is the Second to the First; otherwise the Work is not right.

Case 2.] *Single Indirect Proportion.*

When four Numbers are in an Indirect Proportion; the Rectangle of the First and Second, is equal to that of the Third and Fourth; otherwise there is an Error in the Work.

2dly, Thus: As the First to the Third, so is the fourth Number to the Second in a Direct proportion; otherwise the Operation is not rightly performed.

Case 3.] *Double Direct Proportion.*

When a sixth Number is found in double Direct proportion; the Rectangle of the First, Second and Sixth, is equal to that of the Third, Fourth and Fifth Numbers, if the Work is not Erroneous.

2dly, Thus: As the Product of the fourth and fifth Numbers is to the Sixth; so is the Product of the First and Second to the Third in a single Direct proportion.

Case 4.] *Double Indirect Proportion.*

When five Numbers are given, and a Sixth found in an Indirect or Reverse proportion, the Rectangle (provided the Work is stated by the Rules foregoing in the fourth Section of this Chapter) of the First, Second and Fifth, is equal to that of the Third, Fourth and Sixth Numbers, if the Work is right performed,

2dly, Thus: As the fifth Number is to the Product of the Third and Fourth, so is the Sixth to the Product made of the First and Second, by one single Direct proportion.

CHAP.



Sect. 3.

Practice

A short way of Casting up all sorts of Merchandise

The even p^{ts}
of a £ Sterl. 9

10	0	1/2
6	8	1/3
5	0	1/4
4	0	1/5
3	4	1/6
2	6	1/8
2	0	1/10
1	8	1/12

The TABLE



The even p^{ts}
of a Shilling

6	1/2
4	1/3
3	1/4
2	1/6
1 1/2	1/8
1	1/12

10	0	1/2
5	0	1/4
4	0	1/5
2	2	1/8
2	0	1/10
14	1/8	
16	1/4	

} of a Tun

} of a Cwt



14	1/4
8	1/7
7	1/8
14	1/2
7	1/4
4	1/7
3 1/2	1/8

} of 1/2 a Cwt

} of 1/4 a Cwt

C H A P. VIII.

Of Fractions.

S. 1. Notation and Numeration of Vulgar Fractions.

1. A Fraction is one of more parts of a Unit or Integer, according as the same is divided.
2. Every Fraction consisteth of two parts, viz a Numerator and a Denominator.
3. The Denominator is placed (in Writing) below the line which you write in, and sheweth how many parts the Integer, or Unit, is divided into.
4. The Numerator of a Fraction is (in Writing) placed above the line, and sheweth how many of the said parts, expressed by the Denominator, are contained in the Fraction : For instance :

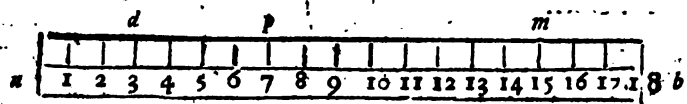
$\frac{3}{4}$ Numerator.
 $\frac{3}{4}$ Denominator.

5. In reading Fractions, the Numerator is first mentioned, then the Denominator ; as the Fraction above is read, three fourth parts of any thing : i. e. The Denominator sheweth, that the Integer is divided into four parts ; and the Numerator, that three of those fourth parts are contained in the Fraction : So by the same Reason

$\frac{1}{4}$ is one Fourth Part,
 $\frac{2}{4}$ is one half, or two Fourth Parts,
 $\frac{2}{3}$ is two Third Parts,
 $\frac{5}{6}$ is five Sixth Parts, &c. As in the following Table.

One Half, &c.	is	$\frac{1}{2}$	is	$\frac{2}{4}$	is	$\frac{3}{6}$	is	$\frac{4}{8}$	is	$\frac{5}{10}$	is	$\frac{6}{12}$	is	$\frac{7}{14}$	is	$\frac{8}{16}$	is	$\frac{9}{18}$	is	$\frac{10}{20}$
Two Thirds, &c.	is	$\frac{2}{3}$	is	$\frac{4}{6}$	is	$\frac{6}{9}$	is	$\frac{8}{12}$	is	$\frac{10}{15}$	is	$\frac{12}{18}$	is	$\frac{14}{21}$	is	$\frac{16}{24}$	is	$\frac{18}{27}$	is	$\frac{20}{30}$
Three Fourths, &c.	is	$\frac{3}{4}$	is	$\frac{6}{8}$	is	$\frac{9}{12}$	is	$\frac{12}{16}$	is	$\frac{15}{20}$	is	$\frac{18}{24}$	is	$\frac{21}{28}$	is	$\frac{24}{32}$	is	$\frac{27}{36}$	is	$\frac{30}{40}$
Four Fifths, &c.	is	$\frac{4}{5}$	is	$\frac{8}{10}$	is	$\frac{12}{15}$	is	$\frac{16}{20}$	is	$\frac{20}{25}$	is	$\frac{24}{30}$	is	$\frac{28}{35}$	is	$\frac{32}{40}$	is	$\frac{36}{45}$	is	$\frac{40}{50}$
Five Sixths, &c.	is	$\frac{5}{6}$	is	$\frac{10}{12}$	is	$\frac{15}{18}$	is	$\frac{20}{24}$	is	$\frac{25}{30}$	is	$\frac{30}{36}$	is	$\frac{35}{42}$	is	$\frac{40}{48}$	is	$\frac{45}{54}$	is	$\frac{50}{60}$
Six Sevenths, &c.	is	$\frac{6}{7}$	is	$\frac{12}{14}$	is	$\frac{18}{21}$	is	$\frac{24}{28}$	is	$\frac{30}{35}$	is	$\frac{36}{42}$	is	$\frac{42}{49}$	is	$\frac{48}{56}$	is	$\frac{54}{63}$	is	$\frac{60}{70}$
Seven Eighths, &c.	is	$\frac{7}{8}$	is	$\frac{14}{16}$	is	$\frac{21}{24}$	is	$\frac{28}{32}$	is	$\frac{35}{40}$	is	$\frac{42}{48}$	is	$\frac{49}{56}$	is	$\frac{56}{64}$	is	$\frac{63}{72}$	is	$\frac{70}{80}$
Eight Ninths, &c.	is	$\frac{8}{9}$	is	$\frac{16}{18}$	is	$\frac{24}{27}$	is	$\frac{32}{36}$	is	$\frac{40}{45}$	is	$\frac{48}{54}$	is	$\frac{56}{63}$	is	$\frac{64}{72}$	is	$\frac{72}{81}$	is	$\frac{80}{90}$
And Nine Tenths	is	$\frac{9}{10}$	is	$\frac{18}{20}$	is	$\frac{27}{30}$	is	$\frac{36}{40}$	is	$\frac{45}{50}$	is	$\frac{54}{60}$	is	$\frac{63}{70}$	is	$\frac{72}{80}$	is	$\frac{81}{90}$	is	$\frac{90}{100}$

So in the line below, the whole line *ab* being a Unit, divided into 18 equal parts ; the line *ad* is $\frac{11}{18}$ the line *ap* is $\frac{7}{18}$ the line *am* is $\frac{11}{18}$ &c.



74. Reduction of Vulgar Fractions.

6. Fractions are either proper or improper.

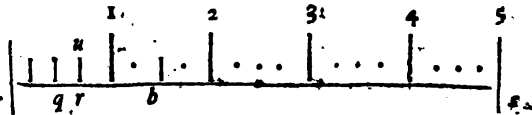
7. A Fraction properly so called, or a proper Fraction, is when the Numerator is less than the Denominator, as the Fractions foregoing.

8. An improper Fraction is when the Numerator is greater than the Denominator; as $\frac{7}{4}$, $\frac{11}{8}$, &c. Again,

9. Fractions are either Simple or Compound.

10. A Simple Fraction is when the Fraction is immediately the Fraction of a Unit or Integer; as those foregoing in the Table, &c.

11. A Compound Fraction is a Fraction of a Fraction, as $\frac{1}{2}$ of $\frac{1}{4}$ of a Pound Sterling, which is equal to 2 s. 6 d. or it is when a Unit is divided into any Number of parts, and each of those parts are again subdivided into parts; these last parts are Compound Fractions, being the Fractions of the Fractions of a Unit. So the whole line (rs) being a Unit, the line r 1, is $\frac{1}{5}$, r 2, is $\frac{2}{5}$, because the Unit is divided into five parts; which five parts being each subdivided into 4 parts, as under the line: I say, each of these last Parts are Fractions of a fifth Part; so the line r q is $\frac{1}{2}$ of $\frac{1}{5}$ of the line rs; r the line r 3, is $\frac{3}{4}$ of $\frac{1}{5}$ of it, &c.



S. 2. Reduction of Vulgar Fractions.

It may seem strange to some, that Reduction is here taught before Addition. &c. but 'tis necessary it should be so, because Reduction is made use of in all the subsequent Rules; to fit and prepare Fractions for Addition, Subtraction, &c.

Case 1.] When a mixt Number is given to be reduced to an improper Fraction,

Rule.] Multiply the Integers by the Denominator of the Fraction, and to the Product add the Numerator, and place the Summ over the Denominator for a new Fraction.

Example.] Reduce $12\frac{3}{4}$ to an improper Fraction: See the Marginal Operation,

$$\begin{array}{r} 12\frac{3}{4} \\ \hline \text{Ans } \frac{51}{4} \end{array}$$

The

The Reason of this Rule.

If the Numerator and Denominator of a Fraction be alike, the Value thereof must be a Unit; so that if you assign a Denominator to any whole Number that shall be reduced to an improper Fraction, your Numerator must be the Product of the whole Number by that Denominator. Thus 1 being reduced to such Fraction, whose Denominator is 2; 2 times 1 is the Numerator, and 2 the Denominator, which is $\frac{2}{2}$ (or 1;) Because, according to the Definition in the 5th Step of the last Section, the Unit is divided into two parts, and there are two of those parts in the Fraction; and as many Units as there are in the Integral part, so many times the Denominator must the Numerator be; because 1 is $\frac{1}{2}$, 2 is $\frac{2}{2}$, &c. which Numerator, made of the Integral part of the mixt Number, must be added to the Numerator of the Fractional part, for the Reason mentioned in Addition of Vulgar Fractions.

Case 2.] When an improper Fraction is given to be reduced to a whole or mixt Number.

Rule.] Divide the Numerator of the Fraction by the Denominator, and the Quotient is a whole Number; and if any thing remain, it must be placed over the Divisor.

Example.] Reduce $\frac{51}{4}$ to a whole or mixt Number.

4) 51 (12 $\frac{3}{4}$ Answer, which proves the last Case

—
II
—

3 Remains.

The Reason of this Rule, is;

That so often as the Denominator can be had in the Numerator, so many Units doth the Fractions contain, for $\frac{1}{2}$ is 1, $\frac{2}{2}$ is 2, $\frac{3}{2}$ is 1 $\frac{1}{2}$, so that $\frac{7}{2}$ must be 3 $\frac{1}{2}$, because 2 can be had 3 times in 7, and 1 remains, which must be $\frac{1}{2}$, because 1 is half of 2, and $\frac{1}{2}$, as I said before, is a Unit or One.

Case 3.] When Fractions have different Denominators, and are to be reduced to a common Denominator.

Rule.] Multiply the Numerator of each Fraction singly, into all the Denominators of the Fractions given, excepting its own, and the Product is a new Numerator; and if you multiply all the Denominators one in another, the Product is a common Denominator.

Example] Reduce $\frac{2}{3}$, $\frac{3}{4}$ and $\frac{4}{7}$ to a common Denominator.

		<i>Thirdly,</i>		
2. The first Numerator.		5 The Numer. of the 3d }	} Mult.	
4. The second Denominator.		4. The Denom. of the 2d }		
<hr/>				
8 Product.	} Multip	20 The Product.	} Mult.	
7 The third Denom.		3 The Denom. of the 1st }		
<hr/>				
56 The first new Numerator.		60 The 3d. new Numerator.		
		<i>Lastly,</i>		
3 The Numerator of the 2d.	} Multip.	3 }	} Denominators.	
3 The Denomat. of the 1st.		4 }		
<hr/>				
9 The Product	} Multip.	12 }		
7 The Denom. of the 3d.		7 }		
<hr/>				
63 The 2d. new Numerator.		84 The common Denominator.		

Now if you place each new Numerator over the common Denominator, you will have

$$\left. \begin{array}{l} \frac{56}{84} \\ \frac{60}{84} \\ \frac{63}{84} \end{array} \right\} \text{Equivalent to } \left\{ \begin{array}{l} \frac{2}{3} \text{ The first Fraction given.} \\ \frac{3}{4} \text{ The second Fraction.} \\ \frac{4}{7} \text{ The third Fraction.} \end{array} \right.$$

The Reason of this Rule.

Since the end of this Rule is to make the Denominators alike, and the Numerators proportion'd thereto, as those given are in proportion; If therefore the Denominators are multiplied by any Numbers that will make the Products alike; and if the respective Numerator be multiplied by the same Number you multiplied its Denominator, it will produce the same thing as this Rule produceth: As if I would reduce $\frac{2}{3}$ and $\frac{3}{4}$ to a common Denominator; if I multiply the Denominator 3, by 8, and the Denominator 4, by 6, the Products will be each 24 for a common Denominator; and if the Numerator 2, be multiplied by the said 8, and the 3 by the 6, the Products will be 16 and 18; so the Fractions in a common Denominator are $\frac{16}{24}$ and $\frac{18}{24}$, equal to $\frac{2}{3}$ and $\frac{3}{4}$, which would have been produced by the foregoing Rule. But since it would in some Cases be tedious to find out Numbers, that, multiplying the several Denominators,

nominators, would produce a common Denominator; it is therefore the most certain way of performing the same, to multiply the Denominators one in another for a common Denominator, as in the Instance last above, of $\frac{1}{3}$ and $\frac{1}{4}$, the 3 \times by the 4, and the 4 by the 3, must produce each 12 for a common Denominator; and if you multiply, as before, each Numerator by the Number you multiplied its Denominator, the Products are new Numerators, proportioned to the common Denominator; as the several Numerators given are proportion'd to their respective Denominators.

Case 4.] To reduce a Fraction into its lowest Term.

Rule.] Take $\frac{1}{2}$, $\frac{1}{3}$, or $\frac{1}{4}$, &c. of the Numerator and Denominator.

Example.] Reduce $\frac{14}{21}$ to its lowest Term.

Say half of 56 is 28, and $\frac{1}{3}$ of 84 is 42, then $\frac{1}{2}$ 28 is 14, and $\frac{1}{3}$ 42 is 21; and because you cannot take half $\frac{1}{3}$, make trial if you can take $\frac{1}{3}$, &c. but since you can only take $\frac{1}{3}$ of both; say, the Sevens in 14 is 2, and the 7 in 21 is 3, so is the given Fraction equivalent to $\frac{2}{3}$ and proves the first Fraction in the last Case to be right: See the Work.

$\frac{14}{21}$	or	$\frac{28}{42}$	or	$\frac{14}{21}$	or	$\frac{2}{3}$
Take $\frac{1}{3}$		Take $\frac{1}{3}$		Take $\frac{1}{3}$		Lowest Term.

The Reason of the last Rule.

By the *Lemma* to the 16th Prop. of the 5th Book of *Euclid. Elem.* Two Numbers, howsoever different, if they are divided by one and the same Number, the Quotients will have like proportion one to another, as the Numbers given to be divided have to each other: As $\frac{1000}{100}$ is equal to $\frac{10}{1}$; Because if 100 the Numerator be divided by 100, the Quotient is 1; and 1000 the Denominator, divided by 100, the Quotient is 10; which $\frac{1}{10}$ is equal to $\frac{100}{1000}$; because as 100 is to 1000, so is 1 to 10; for $100 \times 10 = 1000 \times 1$.

There are other Rules for the performing the Work of the last Case, as thus: Divide the Denominator by the Numerator, and the last Divisor by the Remainder, and continue to do so till nothing remain, and then your last Divisor will divide both the Numerator and Denominator without Remainders, and reduce the Fraction to the lowest Term; as in $\frac{14}{21}$, if you divide 168 by 112, there will remain 56, by which if you divide your last Divisor 112, there will (0) remain; therefore the Numerator and Denominator divided by 56, reduceth your Fraction to its lowest Term. *Case*

28 *Reduction of Vulgar Fractions.*

Case 5.] To reduce a compound Fraction to a Simple one, equivalent to the Compound.

Rule.] Multiply all the Numerators one in another, for the Numerator of the Answer, and the Denominators one in another, for that of the Answer.

Example.] Reduce $\frac{1}{4}$ of $\frac{1}{12}$ of $\frac{1}{20}$ into a simple Fraction.

The Product of the Denominators 4, 12, and 20, is 960, and the Product of 1, 1 and 1 is 1; so the simple Fraction sought for is $\frac{1}{960}$.

The Reason of the Last Rule.

By the Definition of a compound Fraction in the first Section of this Chapter, it is shewed, that such a Fraction is nothing but the Subdivision of the parts of a Unit; where, for instance, you have a Line suppos'd a Unit divided into 5 parts, which represents the Denominator of that part of a comp. Fraction always next the Right-hand in reading thereof; each of which 5 parts being again divided into 4 parts, 4 is the Denominator of that part of a comp. Fraction next the Left-hand; each of which parts being $\frac{1}{4}$ of $\frac{1}{5}$ of the Unit (or whole Line) shews that there are 20 such parts as that 4th, in the Line; which is the Reason why we always multiply the Denominators together (as 4 and 5) to reduce the Fraction of a Fraction into the Fraction of a Unit, or a Compound to a Simple, which is all one. And the Reason of multiplying the Numerators together, (as in $\frac{1}{2}$ of $\frac{1}{3}$ of the last foregoing Line,) is because $\frac{1}{2}$ of $\frac{1}{3}$ (as *r u*) is but one half of $\frac{1}{3}$ of $\frac{1}{3}$; therefore $\frac{1}{2}$ of $\frac{1}{3}$ must be 2 times (*r u*) equal to (*r b*) or $\frac{2}{3}$ of the Line (*r s*) for that which before the Subdivision of the Line, was $\frac{1}{3}$ is (now the whole Line is divided into 20) $\frac{2}{3}$ so that $\frac{1}{2}$ of $\frac{2}{3}$ is equal to $\frac{1}{3}$, and consequently 2 times $\frac{1}{3}$ is $\frac{2}{3}$ which plainly shews why the Denominators of compound Fractions are multiplied together for that of a simple Fraction, and the Numerators are likewise multiplied together for the Numerator of the same Fraction.

Case 6.] To find the Value of any Fraction, whether the same be of Coin, Measure, Weight, &c.

Rule.] Multiply the Numerator of the Fraction by such a Number of Units of the next inferior Denomination, as is equal to a Unit of the Denomination the Fraction is part of, and divide the Product by the Denominator, so the Quotient will Answer your Question; but if any thing remain, reduce that to the next lower Denomination, and divide as before.

Exam-

Reduction of Vulgar Fractions. 79

Examp^l.] What is the Value of $\frac{1}{4}$ of a Hundred Weight?
See the Operation.

$$\begin{array}{r} 134 \text{ Hundred} \\ 4 \text{ Quarters of a Hundred} \end{array} \left. \vphantom{\begin{array}{r} 134 \\ 4 \end{array}} \right\} \text{Multiply}$$

146) 536 (3 Quarters of a Hundred

$$\begin{array}{r} 98 \text{ Quarters remains} \\ 28 \text{ Pound in a Quarter} \end{array} \left. \vphantom{\begin{array}{r} 98 \\ 28 \end{array}} \right\} \text{Multiply}$$

$$\begin{array}{r} 784 \\ 196 \end{array}$$

146) 2744 (18 Pound

$$\begin{array}{r} 1184 \end{array}$$

$$\begin{array}{r} 116 \text{ Pounds remain} \\ 16 \text{ Ounces in a Pound} \end{array} \left. \vphantom{\begin{array}{r} 116 \\ 16 \end{array}} \right\} \text{Multiply}$$

$$\begin{array}{r} 696 \\ 116 \end{array}$$

146) 1856 (12 Ounces

$$\begin{array}{r} 396 \end{array}$$

$$\begin{array}{r} 104 \text{ Ounces remains} \\ 16 \text{ Drams in 1 Ounce} \end{array} \left. \vphantom{\begin{array}{r} 104 \\ 16 \end{array}} \right\} \text{Multiply}$$

$$\begin{array}{r} 624 \\ 104 \end{array}$$

146) 1664 (11 Drams

$$\begin{array}{r} 204 \end{array}$$

$$\begin{array}{r} 58 \end{array}$$

2 lb 3 drs
Answer 03: 18: 12: 117½

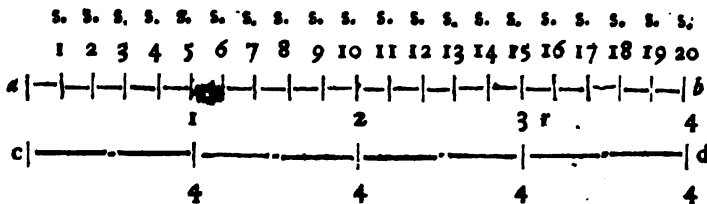
The

Reduction of Vulgar Fractions.

The Reason of the last Rule.

The Reason of this Rule is plain: for suppose a Line, divided into 20 parts, the whole Line, as (*ab*) will represent 1 pound, and the 20 parts 20 shillings. Now suppose there is a Fraction given, of which you will find the Value as $\frac{3}{4}$ of a pound Sterling: Draw another right Line of the same length with the former, and parallel thereto, as (*cd*) which divide (according to the Definition of a Fraction) into 4 parts, to represent your Denominator; and right against 3 of those parts in this Line shall stand 15 in the Line of shillings: which shews, that $\frac{3}{4}$ of a pound Sterling is 15 s. and the same may be said of any other Fraction; for as 4 (the whole Line *cd*, or Denominator of the Fraction given) is in proportion to 20 s. (the whole Line) (*ab*): so is 3 the Numerator or Number of parts in the Fraction given (as in the lower Line) (*cr*) to 15 s. the Value of the said Fraction given: And therefore do you multiply and divide as in the last Rule directed for

Denom.	s.	Numer.	s.
4.	20:	3.	15
	3		
	— 3		
	4) 60	(15	Answer.



Case 7.] To reduce Fractions of a lower Denomination to a higher.

Rule.] Consider what Denomination your Fraction is of, and how many of that make a Unit of the next, &c. to the Denomination you would have your Fraction reduced to; then work as in the fifth Case of this Chapter.

Example.] Reduce $\frac{3}{4}$ of an Ounce Averdupoize into the Fraction of a Hundred Weight.

Ratio.]

Reduction of Vulgar Fractions. 81

Ratio.] 16 Ounces being 1 Pound, $\frac{1}{4}$ of an Ounce is $\frac{1}{16}$ of a pound, then I consider that 28 Pound is a Quarter of an Hundred, and that 4 Quarters is one Hundred; therefore $\frac{1}{4}$ of an Ounce is, $\frac{1}{4}$ of $\frac{1}{4}$ of $\frac{1}{4}$ of $\frac{1}{4}$ of a Hundred; which by the fifth Case foregoing is $\frac{1}{64}$ of a Hundred.

Case 8.] When you would reduce a Fraction of a higher to a Fraction of a lower Denomination.

Rule.] Reduce the Numerator of the Fraction into that Denomination you would have your Fraction of, and place it over the Denominator given for a new Fraction.

Example.] Reduce $\frac{1}{4}$ of the Hundred into a Fraction of an Ounce.

112 Pound } Multiply
16 Ounces }

672

112

Product 1792 Ounces in the Numerator: so the Answer is $\frac{1792}{16}$; which Fraction, in its lowest Term, is $\frac{1}{4}$, and proves the last Case See the Work.

$\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$ $\frac{1792}{16}$ Take $\frac{1}{16}$

Proof, or more brief by dividing the first by 1792, &c. as under Case 4.

Ratio.] The Reason of this Rule is grounded upon that of the 6th Case foregoing, (omitting Division by the Denominator :) For in 1 C. or (112 lb) are 1792 Ounces, now supposing the Denominator 1792; $\frac{1792}{1792}$ of a C. is just $\frac{1}{16}$ of an $\frac{1}{4}$, or 1 Ounce: So, by the same reason, the Hundred being, as in the Example, divided into 8960 Parts, each Part must be less than an Ounce; and to know therefore how much less, or what part of an Ounce the said $\frac{1}{4}$ is, is no more than to see how many times 1792 is contained in 8960; for how much soever 1792, is less than 8960, so much must the Fraction want of being a Unit (as here of 1) by the Reason of the Rules to Cases 1, and 2. So that 1792 being but $\frac{1}{4}$ of 8960, it follows that $\frac{1}{4}$ is but $\frac{1}{16}$ of an Ounce.

§. 3. Addition.

Case 1.] When a simple Fraction is to be added to a Simple.

Rule.] If the Fractions are not in a common Denominator, reduce them to one Denominator, by the third Case of the last Section; then add the Numerators together, and divide the Summ by one Denominator, and the Quotient is the Summ required; and if any thing remain, place it over the Divisor.

Example.] To $\frac{2}{3}$ add $\frac{1}{4}$

The Fractions in a common Denominator are,

	$\frac{12}{18}$	$\frac{15}{18}$
12	The first Numerator.	
15	The Second.	
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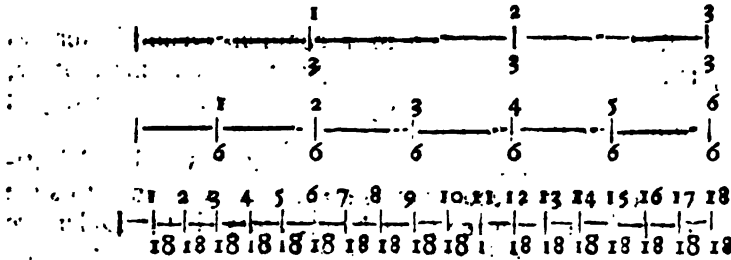
27 The Summ, which divided by 18 is 1, 8, or
1 $\frac{8}{9}$ for Answer.

The Reason of the Rule foregoing.

The Reason why you are first to reduce your Fractions to a common Denominator, before you can know their Summ Total, is, because the Aggregate of most Fractions could otherwise never be discovered; for a Fraction is more or less, according as the Numerator is more or less than its Denominator; so the Numerators are only to be added. Now suppose (as in the foregoing Example) that $\frac{2}{3}$ is to be added to $\frac{1}{4}$, in one of these Fractions the Unit is divided into 6 parts, and in the other, into 3 parts; and if I should add the Numerators together, they make 7; but of which of these parts it is not known: But if the Fractions are reduced to a common Denominator, their Numerators will still retain the same proportion to their Denominators; and when the Unit is divided in both Fractions into a like number of parts, the Summ of those parts contained in each Fraction, is the true Aggregate of both Fractions; so $\frac{2}{3}$ and $\frac{1}{4}$ is $\frac{12}{12}$ and $\frac{3}{12}$ is $\frac{15}{12}$: Or as in the 3 Lines following, which are of equal length, and supposed each a Unit; the 1st divided into 3, the 2d into 6 parts, are the Denominators given, and the third Line is divided into 18 parts (the Product of 3 and 6,) which is the common Denominator; where right against $\frac{2}{3}$ (in the uppermost Line)

Addition of Vulgar Fractions. 83

Line) you have $\frac{1}{3}$ in the lowest Line, and against $\frac{1}{3}$ in the 2d Line you have $\frac{1}{3}$ in the lowest; which shews plainly, that $\frac{1}{3}$ is $\frac{1}{3}$ and $\frac{1}{3}$ is $\frac{1}{3}$: now the Summ of 12, and 15 parts of the lowest Line is $\frac{27}{18}$, or one whole Line and a half; As per Example.



Case 2.] When a mixt Number is to be added to a Mixt.

Rule.] Work with the Fractional parts as before, and afterward add the Summ of the Fractions to the Summ of the Integers, and you have your desire.

Example.] To $1\frac{2}{3}$, add $74\frac{1}{3}$

The Summ of the Fractions by the last Case is $1\frac{1}{3}$, which added to 1 and $74\frac{1}{3}$ makes $76\frac{1}{3}$.

$$\begin{array}{r} 74\frac{1}{3} \\ + 1\frac{2}{3} \\ \hline 76\frac{1}{3} \end{array} \quad \text{Add.}$$

$76\frac{1}{3}$ the Summ required.

Or you may perform the Work, by reducing the given Numbers to improper Fractions, as in *Case 1.* of the last Section; and so proceeding, as in the first Case of this Section.

Case 3.] When a compound Fraction is to be added to a simple.

Rule.] Reduce the compound Fraction to a simple, by the fifth Case of the last Section; then find the Summ by the first Case of this Section.

Example.] To $\frac{1}{2}$ add $\frac{1}{4}$ of $\frac{1}{2}$.

The compound Fractions in a simple are, $\frac{1}{4}$ or $\frac{1}{8}$

The common Denominator of $\frac{1}{2}$ and $\frac{1}{8}$ is as followeth, $\frac{4}{8}$ and $\frac{1}{8}$.

The Summ of the Numerators is 102, and of the Fractions $\frac{102}{108}$ for Answer.

84 Subtraction of Vulgar Fractions.

§. 4. Subtraction.

Case 1.] When a simple Fraction is to be deducted from a Simple.

Rule.] Reduce the Fractions to a common Denominator, as before; then take the Numerator of the Subtrahend from the other, and place the Remainder over the common Denominator, and you have the difference sought.

The Reason of this Rule is plain from what was said of Addition, as to the common Denominators; and if the Denominators are alike, the difference between their Numerators, is the Difference between the Fractions; as may be proved, by adding that Difference to the Fraction subtracted: As, $\frac{1}{2}$ from $\frac{3}{4}$, resta $\frac{1}{4}$; For $\frac{1}{4}$ and $\frac{1}{4}$ is $\frac{2}{4}$.

Example.] From $\frac{3}{4}$, Take $\frac{1}{2}$. See the Work:
 36 The first Numerator. 48 The common Denominator.
 20 The second Numerator.

16 Difference.

Answer $\frac{20}{48}$ or $\frac{5}{12}$.

Case 2.] When a compound Fraction is to be deducted from a Simple.

Rule.] Reduce the compound Fraction to a Simple, by the fifth Case of Section 2. then work as in the last Case.

Example.] From $1\frac{1}{2}$, take $\frac{2}{3}$ of $\frac{3}{4}$
 The compound Fraction in a Simple is $\frac{1}{2}$.

13	16	27
27	14	14
91	64	108
26	16	27

351—The 1st. Numer. 224—The 2d. Numer. 378—The com. D.
 224 Deduct.

127 Remains.

So the Answer is $1\frac{127}{378}$.

Case 3.]

Multiplication of Vulgar Fractions. 85

Case 3.] When a simple Fraction is to be deducted from a whole Number.

Rule.] Deduct the Numerator from the Denominator, and place the Remainder over the Denominator; then deduct 1 from the Integer, and place the Remainder before the remaining Fraction, and you have the Answer.

Example.] From 12, take $\frac{1}{2}$. The Answer is 11 $\frac{1}{2}$

Or thus:

According to the Rules foregoing, place 1 under the 12, and so proceed, as in the first Case of this Section; but the first way is the briefer.

Note, That the 1 borrowed from the 12 (in the first method is $\frac{1}{2}$, so that if from $\frac{1}{2}$ you take $\frac{1}{2}$, there rests $\frac{1}{2}$.

§. 5. Multiplication.

Case 1.] When you are to multiply a simple Fraction by a Simple.

Rule.] Multiply all the Numerators one in another, for the Numerator of the Product, and likewise the Denominators for the Denominator of the Product.

Example.] Multiply $\frac{1}{2}$ by $\frac{1}{2}$. Answer $\frac{1}{4}$ or $\frac{1}{4}$.

The Reason of Multiplication of Fractions.

The Effect of Multiplication of Fractions is different from that of whole Numbers; for the Product is always less than the Multiplied, this is always greater in the whole Numbers, the former being the Multiplying of the parts into which a Unit is divided, which must needs make the parts produced less than those given; the latter multiplying Units, must needs augment the Number; the former decreasing the parts of a Unit to infinite little parts; the latter augmenting the Number of Units to infinite little parts; Now the Reason of the Rule is, That if any Fraction be multiply'd by 1, it produceth the Fraction given; if by $\frac{1}{2}$ it produceth $\frac{1}{2}$ of the Fraction given, &c. So that to multiply $\frac{1}{2}$ by $\frac{1}{2}$, produceth $\frac{1}{2}$ of $\frac{1}{2}$ or $\frac{1}{4}$, which is fully explained in the Reason of the Rule to *Case 3. Sect. 2.*

Case 2.] When you multiply a whole Number by a Fraction.

Rule.] Multiply the Integer by the Numerator of the Fraction, and the Product plac'd over the Denominator is the Answer, which differeth

86. Division of Vulgar Fractions

differeth nothing from the last Case, if you put a Unit under the Integral part, making it like a Fraction.

Example.] Multiply 126 by $\frac{1}{3}$, or 126 by $\frac{1}{3}$.

Answer 42 or 42 , by Case 2. of §. 2.

Case 2.] When you multiply a simple by a compound Fraction,

Rule.] Reduce the compound Fraction into a Simple, and work as in Case 1. of this Section.

Example.] Multiply $\frac{1}{3}$ by $\frac{1}{4}$ of $\frac{1}{2}$.

Answer $\frac{1}{24}$ or $\frac{1}{24}$.

§. 6. Division.

Case 1.] When you would divide a simple Fraction by a Simple.

Rule.] Having placed the Dividend and Divisor, as in the whole Numbers, multiply the Numerator of the Divisor, in the Denominator of the Dividend, for the Denominator of the Quotient; And the Denominator of the Divisor, in the Numerator of the Dividend, for the Numerator of the Quotient.

Example.] Divide $\frac{1}{2}$ by $\frac{1}{3}$.

Answer $\frac{3}{2}$ or $1\frac{1}{2}$.

$\frac{1}{2} \div \frac{1}{3} = \frac{1 \times 3}{2 \times 1} = \frac{3}{2}$

The Reason of this Rule.

1. To make a Fraction greater in Value, is nothing but to multiply (or add to) its Numerator, or to divide or take from its Denominator.

2. To make a Fraction less, is to multiply (or add to) its Denominator, or to divide or take from its Numerator.

3. Upon these two Axioms the reason of the Rule given, for Division of vulgar Fractions will appear. Suppose, for Instance; $\frac{1}{2}$ is to be divided by $\frac{1}{3}$; if it were divided by 1, the Quotient would be $\frac{1}{2}$; and therefore, since it is to be divided by a quarter of 1, the Quotient must 4 times $\frac{1}{2}$.

4. For both in Fractions and whole Numbers, by how much less the Value of the Divisor is, by so much more will that of the Quotient be; which is therefore in this Example according to the first Axiom $\frac{1}{2}$; and shews plainly, why the Numerator of the Dividend

is multiplied by the Denominator of the Divisor to produce the Numerator of the Quotient; whose Denominator is always the same with the Dividend, so often as 2 is the Numerator of the Divisor.

5. But if the $\frac{2}{3}$ be divided by $\frac{1}{3}$, then the Quotient will (by the 4th Step) be but a 3d. of the last Quote; viz. of $\frac{2}{3}$, because $\frac{1}{3}$ (this Divisor) is three times as much as the Divisor.

6. The most natural way therefore to divide by $\frac{1}{3}$ is to take a 3d. of the Numerator of the Quotient arising from dividing the same Fraction by 1, which 3d. part is $\frac{2}{9}$ according to the second Axiom.

7. But because it would often happen, that the Numerator of the Quotient cannot be divided by the Numerator of the Divisor without a Remainder, which would be more troublesome and less exact; it is therefore more practicable (since it produceth the same thing by the 2d. Axiom) to multiply the Denominator of the Dividend by the Number that you should have divided the Numerator of the Quotient, which in this Instance of $\frac{2}{3}$ by $\frac{1}{3}$ is 3 by 3, which produceth 9, so the Answer is $\frac{2}{9}$ by the 6th Step; and plainly shews the Reason why the Denominator of the Dividend is multiplied by the Numerator of the Divisor, so produce the Denominator in the Quotient.

Case 2.] When you divide a whole Number by a Fraction.

Rule.] Place a Unit under the whole Number, and work as in the last.

Example.] Divide 54 by $\frac{1}{3}$. See the Operation.

$54 \div \frac{1}{3} = 54 \times \frac{3}{1} = 126$ Answer 126; which proves the second Case of the last Section.

Case 3.] When you divide a simple Fraction by a Compound.

Rule.] Reduce the Compound to a simple Fraction, and Work as in Case the first.

Example.] Divide $\frac{1}{2}$ by $\frac{2}{3}$ of $\frac{1}{4}$. The compound Fraction is $\frac{1}{6}$.

$\frac{1}{2} \div \frac{1}{6} = \frac{1}{2} \times \frac{6}{1} = 3$ or $\frac{3}{1}$ which proves Case 3. of Sect. 5.

Having in the two last Sections shewed the way of multiplying and dividing Fractions, it would be needless to say any thing of the Golden Rule, since there is nothing in it but what has been already shewed; and since only to multiply and divide by the fractional way, instead of whole Numbers.

Reduction of Decimal Fractions.

§ 4. Of Decimal Fractions.

A decimal Fraction is only different from a Vulgar in this: That the Denominator of a Decimal Fraction is either 10, or some power of 10, viz. 100, 1000, 10000, &c. so that the Denominator is easily known without expressing it; for in a decimal Fraction there is a point or prick toward the Left hand of the Numerator, which point alway posseses the like place, as the first Figure toward the Left hand would if it were to be wrote down: Thus $\frac{1}{10}$ is .1 the point being in the Ten's place, and therefore denotes the Denominator to be 10; $\frac{12}{100}$ is .12; $\frac{125}{1000}$ is .125; $\frac{1964}{10000}$ is .1964; $\frac{17}{100000}$ is .017; $\frac{17}{1000000}$ is .0017, &c.

The manner to reduce a Vulgar Fraction to a Decimal, is by this Proportion.

Rule. As the Denominator of the Vulgar Fraction given, is in proportion to its Numerator:

So is 10000, To the Numerator of the Decimal, whose Denominator is 10000.

Or so is 10000 to the Decimal, whose Denominator is 10000, &c.

Example. What is $\frac{8}{1000}$ in a decimal Fraction: See the Operation:

$$\begin{array}{r}
 8 \\
 \hline
 8) 1000 \text{ (125 Answer.} \\
 \hline
 20 \\
 \hline
 40 \\
 \hline
 \end{array}$$

But because it sometimes happens that a Cypher or more is to posses the 1, 2, &c. Places of the Decimal toward the Left hand, therefore take this

Rule. As many Cyphers as you have in the third Number of the $\frac{3}{4}$ in proportion as above: so many places must you prick off in the Quotient toward the Right hand.

Exam-

Reduction of Decimal Fractions.

Example.] How is 9 d. expressed in the Decimal of a Pound Sterling?

Rule.] Consider that in a Pound are 240 Pence; therefore 9 d. is $\frac{9}{240}$ l. in a vulgar Fraction by the seventh Case of Section the Second foregoing, for 9 d. is $\frac{9}{24}$ of $\frac{1}{10}$ of a Pound.

Then say as in the last Example.

$$240 : 9 :: 10000$$

$$\begin{array}{r} 9 \\ \hline 24 \overline{) 9000} \text{ l.} \\ \underline{ 180} \\ 120 \\ \underline{ 120} \\ 0 \text{ Rem.} \end{array}$$

(.0375 Anfw.)

In this Example, because I had 4 Cyphers in the third Number, therefore I must prick 4 places off toward the Right-hand the Quotient for Decimals; but because the said Quotient did but consist of 3 places, therefore I supply the fourth to the Left-hand with a Cypher.

Note, That the greater your third Number is, the nearer do you bring your Decimal to Truth, when any thing happens to remain, as in the Example following; but in most Cases where the Decimal is not to be multiplied by a great Number, it is sufficient that the fourth Number be 1000.

But when you reduce $\frac{1}{4}$, or $\frac{1}{2}$, or $\frac{3}{4}$ to Decimals, or any Number of Shillings to the Decimal of a Pound, it is sufficient in these Cases if your third Number be 100.

Example 3.] How is 3 Farthings wrought in the Decimal Fraction of a Pound Sterling?

Work, as you see in the *Q. in a 1th Qrs.* Margent by the Rules given in the last Example, and you will find the Answer to be .003125, or $\frac{3}{125}$ Millionth part of a Pound.

$$\begin{array}{r} 3 \\ \hline 96 \overline{) 300000} \text{ l.} \\ \underline{ 120} \\ 480 \\ \underline{ 480} \\ 0 \text{ Remains.} \end{array}$$

(.003125)

Reduction of Decimal Fractions.

Example 4.] How is 12 Pounds expressed in the Decimal of 112, or one Hundred ?

The vulgar Fraction by the last Examples is $\frac{12}{112}$ Hundred, therefore the Decimal is .1071, as followeth.

$$\begin{array}{r}
 112 : 12 :: 10000 \\
 \quad \quad \quad 12 \\
 \hline
 112) 120000 (.1071 \\
 \quad \underline{112} \\
 \quad \quad \quad 800 \\
 \quad \quad \quad \underline{800} \\
 \quad \quad \quad \quad \quad 160 \\
 \quad \quad \quad \quad \quad \underline{160} \\
 \quad \quad \quad \quad \quad \quad \quad 0
 \end{array}$$

48 Remains, which is inconsiderable, being less than $\frac{1}{1000}$ of a Unit.

Example 5.] How is 13 Shillings in the Decimal of a Pound ? In a vulgar Fraction 13 Shillings is $\frac{13}{20}$ l. and in a Decimal .65 l. thus,

$$\begin{array}{r}
 20. 13 :: 100 .65 \\
 \quad \quad \quad 13 \\
 \hline
 20) 1300 (.65 \text{ Answer.} \\
 \quad \underline{130} \\
 \quad \quad \quad 0
 \end{array}$$

0 Remains.

Example

Reduction of Decimal Fractions. 91

Example 6.] What is 14 s. 6 d. in the Decimal of a Pound?
 In 14 s. 6 d. are 174 d. and the Decimal (by the second Example) is .725 l. for

$$\begin{array}{r}
 240 : 174 :: 1000 \\
 \qquad \qquad \qquad 174 \\
 \hline
 240) 174000 \text{ (.725 l. Answer.} \\
 \qquad \qquad \qquad \dots \\
 \hline
 \qquad \qquad \qquad 600 \\
 \hline
 \qquad \qquad \qquad 1200 \\
 \hline
 \qquad \qquad \qquad 0 \text{ Remains.}
 \end{array}$$

Note, That you may by the Rule following, write down any Number of Shillings in the Decimal of a Pound, without any Proportion, or Operation in the Rule of 3, thus;

Rule.] If your Shillings are an even Number, half of them is the Decimal of a Pound; but if they are odd, put a Cypher to the Right-hand, and then the half is the Decimal of a Pound.

Thus 14 s. is .7 l. 16 s. is .8 l. &c. Likewise 13 s. or 130 is .65 l. 15 s. or 150 is .75 l. &c.

You may likewise write down any Number of Pence or Farthings in the Decimal of a Pound, without working by the foregoing Rules.

For if you reduce the given Pence into Farthings; and place a Cypher to the Left-hand, you have the Decimal of a Pound required: but if the said Farthings exceed 14, you may add one (for reason given in the next Case) and another for each 39 Farthings.

Thus 3 d. is .012 l. 9 d. is .037 l. 11 d. is .c46 l. &c.

Case 2.] When it is required to find the Value of any Decimal.

Rule.] Multiply the Decimal given, by such a Number of Units of the next inferior Denomination, as make a Unit of that which your Decimal is of, and prick from the Right-hand of the Products so many places as your Decimal consisteth of: So those towards the Left-hand of the said point or prick are Integers; and those to the Right-hand it, are parts of a Unit of those Integers.

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Example 1.] What is the Value of .1071. of a Hundred? See the Operation.

$$\begin{array}{r}
 .1071 \text{ Hundred} \\
 \underline{4 \text{ Quarters in a Hundred}} \quad \left. \vphantom{\begin{array}{r} .1071 \\ 4 \end{array}} \right\} \text{Multiply} \\
 \hline
 .4284 \text{ Quarters of a Hundred} \\
 \underline{28 \text{ Pound}} \quad \left. \vphantom{\begin{array}{r} .4284 \\ 28 \end{array}} \right\} \text{Multiply} \\
 \hline
 34272 \\
 \underline{8568} \\
 \hline
 \end{array}$$

L. 11.9952 Parts of a Pound.

Note, That if you consider the Denominator of your Decimal to be 10000, you will find this way of discovering the Value of a decimal Fraction to differ nothing from that of Vulgar: *Case 6. Sect. 2.* of this Chapter; because by cutting off 9952 you divide 119952 by the Denominator.

In the last Example you see that the Value of .1071 Hundred is 11 Pound; and the Parts being another Pound, wanting less than a Hundred part of a Unit, you may call the Value 12 Pound: which proves the Work in the fourth Case of the last Section. And,

Note, That as often as the Decimal (as in the Example last preceding) is above .75, in the lowest Denomination, you may call it an Unit.

Example 2.] What is the Value of .747 of a pound Troy? See the Work.

$$\begin{array}{r}
 .747 \text{ Parts of a Pound} \\
 \underline{12 \text{ Ounces in a Pound}} \quad \left. \vphantom{\begin{array}{r} .747 \\ 12 \end{array}} \right\} \text{Multiply} \\
 \hline
 1494 \\
 \underline{747} \\
 \hline
 \text{Ounces } 8.964 \text{ Parts of an Ounce} \\
 \underline{20 \text{ Penny-weight}} \quad \left. \vphantom{\begin{array}{r} 8.964 \\ 20 \end{array}} \right\} \text{Multiply} \\
 \hline
 \text{Penny-weight } 19.280 \text{ Parts of a Penny-weight} \\
 \underline{24 \text{ Grains}} \quad \left. \vphantom{\begin{array}{r} 19.280 \\ 24 \end{array}} \right\} \text{Multiply} \\
 \hline
 112 \\
 \underline{56} \\
 \hline
 \text{Grains } 6.720 \text{ Parts of a Grain}
 \end{array}$$

So

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So that by the Operation you may perceive the Value of $.747$ *l.* is 8 $\frac{3}{4}$ 19 *d.*- $\frac{1}{2}$ 6 grains, and about $\frac{3}{4}$ of a grain.

Example 3.] What is the Value of $.9184$ of a Pound Sterling?

Answer _____ 18 *s.* 4 *d.* 1 *q.*

$.9184$ Parts of a Pound }
 20 Shillings in a Pound } Multiply

Shillings 18.3680 Parts of a Shilling }
 12 Pence in a Shilling } Multiply

_____ $.736$
 _____ 368

Pence 4.4160 Parts of a Penny }
 4 Farthings } Multiply

Farthings 1.6640 Parts of a Farthing.

Note, That the Value of a Decimal of a Pound, as in the last Example, may be found by inspection, by this

Rule.] Double the Figure standing next the point in the Decimal given; and if the next Figure toward the Right-hand the aforesaid Figure is 5 or more, add 1 to the Product: Then what Figure stands in the second place above or under 5, reckon so many Tens of Farthings; and what stands in the third place from the point is so many Farthings; which, as often as they are above 12, make less by 1, or above 39 less by 2. So $.347$ *l.* is 6 *s.* 11 $\frac{1}{2}$ *q.* &c.

The Reason of this Rule.

That place in a decimal Fraction next the prick, is called *Primes*, being so many Tenth-parts of a Pound: Now $\frac{1}{10}$ of a Pound being 2 Shillings; therefore whatever Figure possesseth that place, must be multiplied by 2.

The reason why you add 1 to the Product, as often as the second Figure from the prick is 5, or more, is because 05 of a Pound is 1 Shilling; for if $.1$ *l.* be 2 shillings, then half $.1$ which is $.05$, must be 1 shilling.

Lastly, Your reckoning the second and third places from the prick so many Farthings, supposes 1000 Farthings in a Pound; and there being

94 Addition of Decimal Fractions.

being but 960, that Rule must be something erroneous, but 'tis near enough the Truth for ordinary practice; especially if for the 40 Farthings which the 1000 exceeds the 960, you make this allowance of deducting 1 at every 25; for if 1000 is 40 too much, 500 is 20 too much, 250 is 10 too much, 50 Farthings is 2 Farthings too much, and 25 is 1 Farthing too much; so that your computation for 12 Farthings is; a Farthing too much; and if you deduct a Farthing at all Decimals between 12, and 38 or 39, it may be near enough; for less than a Farthing is never received or paid in *English* Coin. Thus I hope the Rule is made plain, and by it you will find .750 is 7 Tenths of a Pound, or 14*s*. and .050*l*. or 50 Farthings made less by 2 for the Reason aforesaid, is 48 Farthings, or 1 Shilling more, which makes 15*s*. also .125 is 1 Tenth of a Pound or 2 Shillings, .050*l*. or 1 Shilling more, which makes 3*s*. and 44 Farthings (the 9 being 4 above 5) made less by 2, for the Reason aforesaid, is 10½*d*. So the Value is 3*s*. 10½*d*.

§. 8. Addition.

There is no difference between Addition of Decimals, and whole Numbers of one Denomination; observing only to place the Decimals point under point, as in the Examples, and prick so many off the Summ as are in the greatest Number of places in the Decimals given.

<i>Example 1.</i>	<i>Example 2.</i>	<i>Example 3.</i>
46.9765 <i>l</i> .	.39462	.789
360.146	.0013	.3642
41.007	.99	.153
72.9	.176	.9761
521.0295	1.56192	2.2813
Total.	Total.	Tot.

The Reason of this Rule.

The reason of adding Decimal thus, will appear from that of vulgar Fractions, after reduced to a common Denominator, in which Decimals always are, that to the Decimal of the most places, being the common Denominator, which is the Divisor for the Summ of the Numerators, as in the Rule to Case the 1st. of Section the 3d. of this Chapter.

§. 9. Sub-

§. 9. Subtraction of Decimals.

Place the Numbers as in the last, and proceed as in Subtraction of one Denomination.

<p><i>Example 1.</i> From 39.0049 Take 7.947</p> <hr style="width: 80%; margin: 5px auto;"/> <p>Rem. 31.0579</p>	<p><i>Example 2.</i> From 160.99 Take 94.8462</p> <hr style="width: 80%; margin: 5px auto;"/> <p>Rem. 66.1438</p>	<p><i>Example 3.</i> From 389.0 Take 0.346</p> <hr style="width: 80%; margin: 5px auto;"/> <p>Rem. 388.654</p>
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This Rule is the very same with that in vulgar Fractions. §. 4. of this Chapter; Decimals always having a common Denominator, as is said before; so that the Difference between the Numerators or Numbers given, is the Numerator of the Answer; as in vulgar Fractions.

§. 10. Multiplication of Decimals.

In this Rule you are to place the Factors, and work as in whole Numbers: But after you have found the Product, observe this General.

Rule.] As many Decimal places as you have in both the Factors, so many places must you prick off toward the Right-hand of the Product. And if so many places happen not to be contained in the said Product; (as it will happen when you multiply two Fractions together that are of little Value) you are to make up the Number by Cyphers toward the Left-hand the said Product.

The reason of this Rule is plain, it differing nothing from that given for multiplying vulgar Fractions, *Sett.* 5. of this Chapter; for by multiplying the Sums given together, you multiply the Numerators; and by cutting off as many as are in both Decimals given, you multiply the Denominators; and divide that of the Numerators by the Product of the Denominators. Thus to multiply $\frac{1}{2}$ by $\frac{3}{4}$, is the same as .75 by .5, and 100 by 10; *viz.* $\frac{75}{100}$ by $\frac{10}{100}$, for .5 times .75, is .375; and 10 times 100, is 1000: so the Product is $\frac{750}{1000}$, or .375.

Exam-

96. Multiplication of Decimal Fractions.

Example 1.
 Multiply 3.467
 By 19.01

3467
 31203
 3467

Prod. 65.90767

Example 2.
 Multiply 36492
 By .032

72984
 109476

Prod. 1167.744

Example 3.
 Multiply .13461
 By 42

26922
 53844

Prod. 5.65362

Example 4.
 Multiply .1264
 By .247

8848
 5056
 2528

Prod. .0312108

Example 5.
 Multiply .01832
 By .007

Prod. .00012824

Example 6.
 Multiply .048
 By .12

Prod. .00576

S. 11. Division.

Division is the same with that of whole Numbers; all the difficulty therefore is, to know how many Decimal places to prick off toward the Right-hand of the Quotient: For which take this

Rule.] Take notice how many Decimal places you have in the Dividend, and how many in the Divisor; and as many as the difference is, so many places must you prick off to the Right-hand of the Quotient: But if so many places be not in the Quotient, as the
 said

Said Difference : make up the Number by prefixing Cyphers toward the Left-hand.

Decimal Fractions may also be divided as Vulgar, *See*. 6. of this Chapter; as $\frac{2}{3}$ by $\frac{1}{11}$ quotes $\frac{22}{33}$ or 6.

Example 1.] Divide 12.43210
by 9.465. See the Operation.

$$9.465 \overline{) 12.43210} \quad (1.31$$

29671

12760

Remains 3295

Note, That in this and most other Examples in Division of Decimals, it will be necessary to place Cyphers toward the Right-hand of the Dividend: and that you may know what Number of Cyphers to put to the Right-hand of any Dividend, observe this

Rule 1.] Consider how many Decimal places you would have in the Quotient, (as 3 is sufficient

ent, if it is not afterward to be multiplied by any thing,) and also how many Decimal places you have in your Divisor; and make so many Decimal places in the Dividend by adding Cyphers, if need require, as in the Example in the Margin, where 3.46 is divided by 1.47: and because I would have 3 Decimals in the Quotient, and there are two in the Divisor, I must make 5 Decimal places in the Dividend.

$$1.47 \overline{) 3.46000} \quad (2.353$$

.....

520

790

550

109 Remains.

The Remainder being less than 1 Thousand part of an Unit, is not material. So much for Division.

The Golden Rule is the same with that in whole Numbers, observing Multiplication and Division of Decimals, as they are already taught.

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S. 1. Rules of Practice.

BEfore you enter upon these Rules following, it is necessary you should have the foregoing Tables of the *Aliquot* parts of Money and Weight well fixed in your Mind, and likewise the Table following of the 9 Digits, multiplied by 12, which will enable you to multiply or divide any Number by 12, as tho' it were but a Digit.

12 Times	{	1 = 12	12 Times	{	4 = 48	12 Times	{	7 = 84
		2 = 24			5 = 60			8 = 96
		3 = 36			6 = 72			9 = 108

As a necessary Introduction to Practice, you are also to learn to divide a Number by any of the 9 Digits or 12, without putting down more Figures than the Number to be divided and the Quotient: For the Rules of Practice being of daily use with the Merchants ought to be performed with all imaginable Brevity, I shall therefore give the following Examples, to inform the Learner how to take $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c. of any Number, and then proceed to what I chiefly design in this Section; namely to shew how the Value of any Quantity of Merchandice may be found with most Dispatch.

Admit then you would take half 3164: Say the Two's in 3 is 1 (and the 1 over makes the next 1 Eleven) Two's in 11 is 5, and the 1 over makes the Six 16, Two's in 16 is 8, Two's in 4 is 2; so that the half of 3164 is 1582. Also by the same Rule $\frac{1}{3}$ of 18765 is 6255; $\frac{1}{4}$ of 46723 is 3893, and 7 remains; and $\frac{1}{5}$ of 47632 is 2381, if according to the third Case of the 5th Chapter, you cut off the Figure in Unit's place of the Dividend, and take $\frac{1}{5}$ the rest: And in these Cases, what remains, is always of the same Name with the Dividend.

$\frac{1}{2}$ of	3164	is	1582
$\frac{1}{3}$ of	18765	is	6255
$\frac{1}{4}$ of	46723	is	3893 : 7 Rem.
$\frac{1}{5}$ of	47632	is	2381 : 12 Rem.

Case 1.] When the Price of a Unit or Integer of a Commodity is 1 Shilling.

Rule.] Take $\frac{1}{10}$ of the given Number for the Answer, because 20 s. is 1 Pound.

Example.] What is 46743 Pound of Cotton-wool worth at 12d. per Pound? See the Operation.

$\frac{1}{10}$ of 46743

is 4674 3s. Ans.

Case 2.] When the Price of any Commodity is 2 Shillings.

Rule.] Take $\frac{1}{20}$ of the given Number, as 19764 at 2 s. in the third Example of the third Case of Chapter the Fifth. Or cut off Unit's place,

so those Figures to the Left-hand are Pounds, and those to the Right, so many 2 Shillings. *Facit.*

The Reason of this Rule.

Two Shillings is $\frac{1}{5}$ of a Pound, and to divide a Number by 10, is only to cut off Unit's place of the Dividend and Divisor, by which the Divisor will be but 1, and the Dividend less by the Unit's place cut off, as $\frac{1}{10}$ is equal to $\frac{1}{2}$, thus $\frac{1}{10}$: Now 1 being a Number which does not divide any other, therefore the Figures remaining of the Dividend to the Left-hand must be the Answer in Pounds; and the Figure cut off in Unit's place being so many Two Shillings as the Digit denoteth, must therefore be multiplied by 2, to produce Shillings.

By this Rule you have also the Reason of reducing Shillings into Pounds, by cutting off Unit's place of the Dividend, and taking $\frac{1}{2}$ the rest for Answer, because 1 s. is $\frac{1}{2}$ of 2 s. or it is $\frac{1}{10}$ of a Pound.

Example.] What is the Price of 19764 Yards at 2 s? See the Operation above.

Note. That what remains is always (as was said before) of the same Denomination with the Dividend; so that in the last Example, 4 remaining is 4 two Shillings, or 8 s.

Case 3.] When the Price of the Unit is any other even Number of Shillings under 20 s. take this

Rule.] Take $\frac{1}{2}$ the Price of the Integer, and by that multiply the Summ given, and the Product is pounds; only when you multiply the

the first Figure toward the Right-hand, double the Excess of the Product above Ten or Tens for Shillings, and carry the said Tens to the Pounds, as in the Examples following.

The Reason of this Rule

Is plainly deduced from the common Rule of multiplying any Number of Integers by the Value of one Integer, to give the price of all the Integers; and from the Rule for taking $\frac{1}{2}$ a Number of Shillings (except Unit's place) for Pounds; for it produceth the same thing, if I take $\frac{1}{2}$ the Product of 2 Numbers multiplied together, as if I multiply one of the Numbers by $\frac{1}{2}$, the other, thus: If I multiply 640 by 6, $\frac{1}{2}$ the Product is 1920, equal to the Product of 640 by 3, which shews the Reason of multiplying the Number given by $\frac{1}{2}$ the Price of the Integer, for the Answer in Pounds. And as for the Figure in Unit's place, which is, in this Case, always Shillings; the multiplying it by $\frac{1}{2}$ the Price of the Integer, the doubling the Number above Ten or Tens in the Product for Shillings of the Answer, &c. is the same as if you multiply the said Figure in Unit's place by the whole Price of the Integer, and put the Shillings above or under a Pound in the Shilling's place, and carry 1*l.* for every 20*s.* to the Pound's place, as in the following Example, if you multiply the 3 by 6*s.* it produceth 18*s.* and the other 3 Figures, multiplied by $\frac{1}{2}$ the Price of the Integer, for the Reason aforesaid, produceth the Pounds, *viz.* 1296*l.* 18*s.*

Example 1.] What the Price of 4323
Yards at 6*s.* per Yard?

Work as in the Margent.

4323 Yards at 6*s.*

L 1296: 18*s.* Answ.

Example 2.] What the Price of 16947
Yards at 8*s.* per Yard?

In this Example, say, 4 times 7 is 28,
twice 8 is 16*s.* and carry 2 Pound; 4 times
4 is 16, and 2 is 18; 8 and carry 1, &c.

16947 Yards at 8*s.*

6778*l.* 16*s.* Facit.

Example 3.] What the Price of 7943
Yards of Broad-cloth at 18*s.* per Yard?

7943 Yards at 18*s.*

7148*l.* 14*s.* Facit.

Note. That from the Rule in this Case of an even Number of Shillings, are excepted 10*s.* and 2*s.* For when the Price of the
Unit

Unit is 2s. work as in the second Case: and if the Price of it is 10s. take half the Integer given, because there are twice 10s. in a Pound.

Example 4.] What the Price 369 Ells of Holland at 10s. per Ell?
 369 Ells at 10 s.
 184 l. 10 s. Facit.

Case 4.] When the given Price of a Unit of any Wares or Commodity, is any odd Number of Shillings under 20.

Rule.] Work for the next even Number of Shillings, that are less than the said odd Number, by the Rules in the last Case; and for the odd Shilling, work as in the first Case, and the Summ is the Answer in Pounds.

Example 1.] What is the Price of 859 Yards of Mullin at 17 s. per Yard? See the Margent.
 859 Yds at 17 s.
 1
 17
 687 4 at 10 s.
 42 19 at 1
 730 3. Facit.

From this last Rule is excepted 5 s. For if the Price of the Integer is 5 s. take $\frac{1}{4}$ of the given Number, because 5 s. is $\frac{1}{4}$ of a Pound.

Example 2.] What is the Price of 3743 lb of Coffee at 5 s. per Pound?
 3743 lb at 5 s.
 935 l. 15 s.

See the Work in the Margent: where observe that the 3 remaining is 3 five Shillings, or 15 s.

Case 5.] When the Price of the Integer is 1 d. or any other Number of Pence, which are the *Aliquot*, or even part of a Shilling.

Rule.] Divide the Number by the said part, and those Shillings into Pounds by the first Case.

Example 1.] At 1 d. per Pound, what is the Price of 9764 lb at 1 d. per lb?
 9764 lb at 1 d.
 is 813 l. 8 d. Rem.

Facit 40 l. 15 s. 8 d.

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Example 2.] What cost 13147 lb of $\frac{1}{2}$ of 13147 lb at 2d. damaged Raisins, at 2d. per Pound?

Ans. 109 l. 11 s. 2 d.

Or, take $\frac{1}{2}$ of the given Number, by cutting off the Cypher and 7, and you perform it at once.

Facit 2191 s. 2 d.

Example 3.] What cost 87341 Pound $\frac{1}{4}$ of 87341 lb. at 3d. of Sugar at 3d. per Pound?

Ans. 109 l. 15 s. 3 d.

Or, take $\frac{1}{4}$ of the given Number, viz. $\frac{1}{4}$ of 2183.

Facit 2183

Facit 109 l. 15 s. 3 d.

Example 4.] What cost 3097 Pound of Raisins at 4d. per Pound?

Ans. 51 l. 12 s. 4 d.

Or, take $\frac{1}{4}$ of the given Number. See the Operation of each in the Margent.

Facit 3097 lb. at 4d.

is 10321 4d. Rem.

Facit 51 l. 12 s. 4 d.

Example 5.] What cost 14032 Pound of Sugar at 6d. per Pound?

In this last Example of 6d. you need only to take a fourth part of the given Number, except the Unit's place, which you cut off, and you have the Ans. 350 l. and the 32 Six-pences that remains are 16 s.

Facit 14032 lb. at 6d.

Makes 350 l. 16 s.

Case 6.] When the Price of a Unit or Integer of any Commodity is any Number of Pence under 12; that are not an even part of a Shilling; as 5d. 7d. 8d. 9d. 10d. or 11d. you are to work as in this and the following Examples.

Example.] What cost 34071 Pound of Figs at 5d.?

Rule.] Because 5d. is a sixth part of half a Crown, take $\frac{1}{6}$ and then $\frac{1}{2}$ of the Quotient for Pounds, as followeth:

$\frac{1}{6}$ 34071 lb. at 5d.

Facit 5678 75 d. Remains

Facit 709: 16: 3

Examp

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Example 2.] When the Price of the Unit of any thing is 7 d.

Rule.] Take first $\frac{1}{20}$ of the given Number, because 80 Three-pences make 1 l. then take $\frac{1}{20}$ of the given Number, (because 60 Groats makes a Pound Sterling,) and add to the $\frac{1}{20}$ and the Summ is the Answer in Pounds. See the Work following.

Example.] What cost 321 Pound of damaged Cotton at 7 d. per Pound?

$\frac{1}{20}$ of 321 lb. at 7 d.

Add } is 4 l. 3 d. Remains.
and $\frac{1}{20}$ is 3 l. 7 s. Returns.

Facit 9 l. 7 s. 3 d.

Note, That the 1 remaining above the first Quotient, is 1 Three-pence; and the 21 remaining above the second Quotient, is 21 Four-pences (by the Rules foregoing) or 7 s. so the Answer is 9 l. 7 s. 3 d.

Example 3.] When the given Price of a Unit or Integer is 8 d.

Rule.] Take $\frac{1}{20}$ of the given Number, and put it down twice, and the Summ is the Answer in Pounds, or $\frac{1}{20}$ of the given Number is the Answer at once.

Example.] What cost 3746 Yards of Ribbon at 8 d. per Yard?

$\frac{1}{20}$ of 3746 Yards at 8 d.

Add } is 62 l. 8 s. 8 d.
62 l. 8 s. 8

Facit 124 l. 17 s. 4

Example 4.] When the given Price of the Integer is 9 d.

Rule.] Take $\frac{1}{20}$ of the given Number, for 6 d. and $\frac{1}{20}$ of that Quotient for 3 d. and the Summ is the Answer in Pounds.

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Example 4.] What cost 4052 Bushels of Coals at 9 d. per Bushel?
The Operation followeth.

$$\begin{array}{r}
 \frac{1}{7} \text{ of } 4052 \text{ at } 9 \text{ d.} \\
 \hline
 \text{is } 579 \text{ l. } 6 \text{ s. } 2 \text{ d.} \\
 \frac{1}{2} \text{ of } 101 \text{ l. } 6 \text{ s. is } 50 \text{ l. } 13 \text{ s.} \quad \left. \vphantom{\frac{1}{2}} \right\} \text{Add} \\
 \hline
 \text{Facit } 151 \text{ l. } 19 \text{ s.}
 \end{array}$$

When the given Price of the Unit or Integer is 10 d.

Rule] Take $\frac{1}{7}$ for 6 d. and $\frac{1}{2}$ for 4 d. of the Number given, and the Summ is the Answer in Pounds.

Example 5.] What cost 3179 Pound of Hops, at 10 d. per Pound?

$$\begin{array}{r}
 \frac{1}{7} \text{ of } 3179 \text{ at } 10 \text{ d.} \\
 \hline
 \text{is } 454 \text{ l. } 9 \text{ s. } 6 \text{ d.} \\
 \frac{1}{2} \text{ is } 52 \text{ l. } 19 \text{ s. } 8 \text{ d.} \quad \left. \vphantom{\frac{1}{2}} \right\} \text{Add} \\
 \hline
 \text{Facit } 132 \text{ l. } 9 \text{ s. } 2 \text{ d.}
 \end{array}$$

When the given Price of the Integer is 11 d.

Rule.] From the given Number (supposing it shillings) take $\frac{1}{7}$ thereof, and the Remainder is the Answer in shillings; which bring into pounds by Case the first.

Example 6.] What cost 3470 Pound of Copper at 11 d. per Pound?

$$\begin{array}{r}
 \frac{1}{7} \text{ of } 3470 \text{ lb.} \\
 \text{is } 495 \text{ s. } 2 \text{ d.} \\
 \hline
 \text{Rem. } 3180 \text{ s. } 10 \text{ d.} \\
 \hline
 \text{Facit } 159 \text{ l. } 00 \text{ s. } 10 \text{ d.}
 \end{array}$$

Case 7.] When the given Price of a Unit or Integer is Farthings under 4.

Rule.] Take the *Aliquot* parts of $1d.$ or $1s.$ and work for the shillings as before.

Example 1.] What cost 19746 Yards of Tape, at 1 Farthing per Yard?

In this Example take $\frac{1}{4}$ for Pence, $\frac{1}{12}$ for Shillings, and $\frac{1}{20}$ for Pounds.

$\frac{1}{4}$ of 19746 Yards at 1 Farthing.

$\frac{1}{12}$ 4936 d. 2q.

$\frac{1}{20}$ 411 s. 4 d.

1

Facit 20 l. 11 s. 4 d.

Example 2.] What cost 47390 Yards of Tape, at 2 Farthings per Yard?

In this Example take $\frac{1}{2}$ for Pence, and proceed as in the last.

$\frac{1}{2}$ 47390 Yards at 2 Farthings.

$\frac{1}{12}$ 2369 s. d.

1974 s. 7 d.

1

Facit 98 l. 14 s. 7 d.

Example 3.] What cost 41038 of Ditto, Yards at 3 Farthings per Yard?

In this Example take $\frac{1}{2}$ for 3 half-pences, $\frac{1}{4}$ of the 3 half-pences for shillings, &c.

$\frac{1}{2}$ 41038 Yards at 3 Farthings.

$\frac{1}{4}$ 20519 Three half-pences.

2564 s. 10 d.

1

Facit 128 l. 4 s. 10 d.

Or take $\frac{1}{20}$ of $\frac{1}{2}$ of the given Number.

Case 8.]

Case 8.] When the Price of the Integer is Shillings and Pence:

Rule.] Work for the Shillings as is before directed, and also for the Pence as before taught, and the Summ is the Answer in Pounds.

But if the Pence given be an *Aliquot* part of the Shillings given, you may take such a part of the Quotient for shillings, and the Summ of the Quotients is the Answer. Or if the shilling and pence together be an *Aliquot* part of a pound; take such part, and you have the Answer at the first Operation in pounds.

Example 1.] What cost 1914 Ells of Lockram, at 1 s. 8 d. per Ell?

Rule.] Take $\frac{1}{12}$, because 1 s. 8 d. is $\frac{1}{12}$ of a Pound.

$\frac{1}{12}$ of 1914 Ells at 1 s. 8 d.

Facit 159 l. 10 s.

Example 2.] What cost 2789 Ells of Bagg-holland at 3 s. 4 d. per Ell?

Rule.] Take $\frac{1}{6}$, because 6 Three shillings Four pences make a Pound.

$\frac{1}{6}$ 2789 Ells at 3 s. 4 d.

Facit 464 l. 16 s. 8 d.

Note, That the 5 remaining is 5 Three shillings 4 pences.

Example 3.] What cost 978 Gross of Buttons at 6 s. 8 d. per Gross?

Rule.] Take $\frac{1}{3}$, because 6 s. 8 d. is $\frac{1}{3}$ of a Pound.

$\frac{1}{3}$ of 978 at 6 s. 8 d.

Facit 326 l.

Example 4.] What cost 796 Ells of Dowlas, at 3 s. 10 d. per Ell?

Rule.] Take $\frac{1}{2}$, as in the second Example, for 3 s. 4 d. and $\frac{1}{4}$ for the 6 d. and the Summ of the Quotients is the Answer as followeth.

$\frac{1}{2}$ of 796 Ells at 3 s. 10 d.

152 l. 13 s. 4 d. at 3 s. 4 d.
 $\frac{1}{4}$ is 19 l. 18: 0 at 6 d.

Facit 152 l. 11 s. 4 d. for Answer.

Example 5.] At 17 s. 4 d. per Yard, what cost 394 Yards of Broad Cloth?

Rule.] Take for 17 s. as is before taught, and $\frac{1}{3}$ of the given Number for the 4 d.

394 at 17 s. 4 d.

315 l. 4 s. for 16 s. }
 19 l. 14 s. for 1 s. } Add
 $\frac{1}{3}$ of the 19: 14. is 6 l. 11: 4 d. for 4 d. }

Facit 341 l. 9 s. 4 d.

Or this may be done at twice by working for 14 s. and 3 s. 4 d. as before.

Example 6.] What cost 1504 Ells of Cambrick at 19 s. 9 d. per Ell?

Rule.] Take for the 19 s. as is taught in shillings per Unit, and for the 9 d. as is directed in pence per Unit.

1504 Ells at 19 s. 9 d.

1353 l. 12 s. at 18 s. }
 75 l. 4 at 1 s. } Add
 37 l. 12 at 6 d. }
 18 l. 16 at 3 d. }

Facit 1485 l. 4 s. 00 Summ

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Note. That in this last Example, after you have done with the shillings, you may take $\frac{1}{2}$ of 75 l. 4 s. for the 6 d. because 6 d. is $\frac{1}{2}$ a shilling, and $\frac{1}{2}$ of 37 l. 12 s. for the 3 d. because 3 d. is $\frac{1}{4}$ of 6 d. which is somewhat more brief.

But this is more briefly resolved by deducting from 1504 one 8oth thereof, and the Remainder is the Answer.

Example 7.] What cost 1904 Ends of Dimity at 14 s. 10 d. per End?

1904 at 14 s. 10 d.

1332 l. 16 s. at 14 s.)	}	Add
$\frac{1}{2}$ = 47 l. 12 s. at 6 d.)		
$\frac{1}{4}$ = 31 l. 14 s. 8 at 4 d.)		

Facit 1412 l. 2 s. 8 d.

Example 8.] What cost 1865 Yards of Fustian at 2 s. 4 d. per Yard?

1865 at 2 s. 4 d.

186 l. 10 s. at 2 s.)	}	Add
31 l. 1 s. 8 d. at 4 d.)		

Facit 217 l. 11 s. 8 d.

Case 9.] When the given Price of the Integer is Pence under 12, and Farthings under 4

Rule.] Work for the Pence as is before taught; and if the Farthings are an even part of the Pence that you work'd for next before the Farthings, take such part; otherwise work for the Farthings, as is taught before at Farthings per Unit.

Example 1.] What cost 3471 Dozen of Buttons, at 3 d.

$\frac{1}{2}$ of 3471 at 3 d.
1

$\frac{1}{4}$ of 43 l. 7 s. 9 d.)	}	Add
is 7 l. 4 s. 7 $\frac{1}{2}$ d.)		

Facit 30 l. 12 s. 4 d.

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Example 2.] What cost 9761 Pounds of Sugar, at $9\frac{1}{2}$ per Pound?

$\frac{1}{2}$ of 9761 l. at $5\frac{1}{2}d.$

|—————|—————|

is 122 l. 00 s. 3 d. at 3 d.

is 81 l. 6 s. 10 d. at 2 d. } Add

of which is 19 l. 10 s. 4 d. at 1 d. }

Facit 213 l. 10 s. $5\frac{1}{2}d.$

Example 3.] What cost 1794 Pounds of Pepper, at $3\frac{1}{2}d.$ per Pound?

$\frac{1}{2}$ of 1794 at $3\frac{1}{2}d.$

|—————|

is 22 l. 8 s. 6 d.

$\frac{1}{2}$ of the last Quote is 5 l. 12 s. $1\frac{1}{2}$ at 3 q. } Add

Facit 28 l. 00 s. $7\frac{1}{2}d.$

Case 10.] When the Price of the Integer or Unit is Pounds, Shillings, Pence, and Farthings.

Rule.] Multiply the given Number by the Pounds, and to the Product add what the same comes to at Shillings, Pence, and Farthings, as is taught before.

Example.] What cost 276 Hundred, 2 Quarters of Steel at 2 l. 3 s. $8\frac{1}{2}d.$ per Hundred?

For Answer: First multiply the 276 by 2 l. then for 3 s. 4 d. take $\frac{1}{2}$ of 276; for the 4 d. take $\frac{1}{2}$ of it; and for the penny, take $\frac{1}{2}$ of the last Quotient; and for the half Hundred, take $\frac{1}{2}$ of 2 l. 3 s. $8\frac{1}{2}d.$ which is 1 l. 1 s. $10\frac{1}{2}d.$ and the Summ of these is the Answer. See the Operation.

C.

Q.

276 : 2 : At 2 l. 3 s. $8\frac{1}{2}d.$

|—————|

552 l. at 2 l.

46 l. at 3 s. 4 d.

4 l. 12 s. at 4 d. (this is $\frac{1}{2}$ of the l. 46)

0 l. 11 s. 6 d. at 2 q. which $\frac{1}{2}$ is of 4 l. 12 s.

1 l. 1 s. $10\frac{1}{2}d.$ for the half Hundred.

Facit 604 l. 5 s. $4\frac{1}{2}d.$

§. 2. Con-

Allowance for Tares.

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§. 2. Concerning Tare and Trett.

Tare is an Allowance in Merchandize made to the Buyer by the Merchant for the Weight of the Bagg, Cask, Chest, Freal, Hogsh-head, &c. in which any Merchants Goods are put, After this Allowance is deducted from the Gross-weight, (which is the Weight of the Commodity and Cask, Hogsh-head, &c. together) the remainder is the Weight of the Commodity only, and is called Nett-weight: The Allowances for *Tare* are various, as you shall see by and by.

Trett is an Allowance made for the Waste, that may be mixt with the Commodity, as Dust, Dirt, &c. which is always 4 *l.* at 104; but tho' the Merchant alloweth this to the Retailer, yet himself is only allowed *Tare* in paying Custom: so that he payeth as well for the Dust as the best of the Commodity.

Nota, That in such Commodities wherein *Trett* is allowed, the Remainder, after the *Tare* is deducted, is called *Suttle*: out of which *Suttle* the Allowance for *Trett* is made; and, when it is deducted, the Remainder is called *Nett*. But if no Allowance is made for *Trett*, that Weight is called *Nett*, that remaineth after the *Tare* is deducted, as was said before; so that the *Tare* is always deducted from the Gross-weight, and the *Trett* from the *Suttle*: And to shew the best Method for discovering and deducting these Allowances, is the Work of this Section, and shall be explained in the Cases following; wherein I shall be as plain as I can, because I do not know any where the same is done already with that Variety; Brevity and Perpicuity which is necessary.

Case 1.] When the Allowance is 14 *l.* per Cent. (as of Almonds, Steel, Hemp,) how to compute the Nett-weight.

This Case, as also the rest, may be resolved several ways; which after I have given you an Example of, I shall pitch upon that which, in my Opinion, is the briefest.

Example 1.] What is the Nett-weight of 96 C. 2 *Qrs.* 7 *lb.* Gross, *Tare* at 14 *l.* per Cent. to be deducted?

The first way.

Rule.] Reduce the given Weight into Pounds, as in the third Example of *Case 2.* §. 2. *Chap. 6.* as followeth; then say, as 112 *lb.*

to

Merchants Accompts: Or,

to 14 its Tare, so is the Pounds given to the Answer in Tare; which deduct from the Pounds Gross, and the Remainder is Pounds Nett.

C. Qrs. lb.
 9 : 2 : 7
 9
 93
96
 1071 l. Gross
 2dly. Say,
 Gross Tare, Gross
 112; 14: 1071
 14

 4284
 1071

1071 lb. Gross.
 Deduct 133 $\frac{1}{2}$ lb. Tare.

 Answer 937 $\frac{1}{2}$ lb. Nett.

112) 14994 133 lb. Tare.

 379

 434

98 Remains, or $\frac{98}{112}$ or $\frac{1}{2}$ of 1 lb. and better.

A Second way of working the last Question.

Reduce the 2 Quarters 7 Pound into the Decimals of a Hundred, as is taught in Reduction of Decimals; then deduct 14 the Tare from 112, and the Remainder is 98: So must you multiply 9.563 C. by 98, and the Product is Nett-pounds required.

9.563 C. Gross.
 98 Nett-pounds in 1 C. } Multiply

 76504
 86067

937.174—The Answer Decimally.

A Third

Allowance for Tare.

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A Third way of finding the Tare and Nett-weight by Practice.

Because 14 lb. is $\frac{1}{2}$ part of 112: take $\frac{1}{2}$ of the given Number, and you have the Tare sought.

$\frac{1}{2}$ of 9 C.	2 Qrs.	7 lb. Gross.
is 1 :	0 :	21 $\frac{1}{2}$ lb. Tare, deduct.

Remains 8 : 1 : 13 $\frac{1}{2}$ Nett.

A Fourth way of finding the Tare.

Multiply the Hundreds by the Tare to be allowed for 1 Hundred; and for the Quarters and Pounds in the Gross-weight, take a proportionable part of the said Allowance for one Hundred, and the Summ is the Tare in pounds; which you may either reduce into Hundreds, and deduct it from the Gross-weight, or the Gross-weight into pounds, and then deduct the Tare in Pounds.

So that to find what Tare is to be allowed for 9 : 2 : 7 Gross,
Tare at 14 Pound per 112:

	C.	Q.	lb.
Multiply $\frac{1}{14}$	9 :	2 :	7 Gross.

For 9 C. you have	126 lb.	}	Tare.
For 2 Quarters—	7 lb.		
For 7 Pound =	0 $\frac{1}{2}$ lb.		

Tot. Tare = 133 $\frac{1}{2}$ lb. or 1 : 00 : 21 $\frac{1}{2}$ lb. The Answer as before.

This Method (especially where the Tare is to be allowed per Cent. is not an even part of 112 lb.) is the most easie and expeditious; but the Learner may make use either of the 3d. or 4th. way, as he best liketh; by both which Methods, the following Cases are wrought.

Case 2.] When the Allowance for Tare is 4 l. per Hundred-weight, as for Cotton-wool, Hopps, Feathers, Lambs-wool, or Polish.

Rule.] Take $\frac{1}{4}$ of $\frac{1}{2}$ of the Gross-weight, and you have the Tare; which deduct from the Gross, and the Remainder is the Nett-weight required.

Q

Exam.

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Example.] What is the Nett-weight of four Sacks of Cotton-wool, whose Number and Weight is as followeth.

C. <i>Q.</i> <i>lb.</i>	By the 4th way	C. <i>Q.</i> <i>lb.</i>	
N ^o 31 11 3 19	Multiply	9 3 24	
39 2 2 07			
36 3 0 14			
40 2 1 12			
Total Gross		Tare	Gross
9 3 24		{ <i>lb.</i> 96, for 9 <i>Q.</i>	
		{ <i>lb.</i> 3, for 3 <i>qrs.</i>	
		{ <i>lb.</i> 6, for 2 <i>lb.</i>	

Total Gross 9: 3: 24 at 4*l.* per Cent. Total Tare

2: 1: 27 is $\frac{1}{4}$; of which take $\frac{1}{4}$

is 0: 1: 11; The Tare deduct from the Gross.

Remains 9: 2: 12; Nett.

Note, That what Hundreds remain in dividing, must be reduced into Quarters of Hundreds; and what Quarters remain, must be reduced into Pounds, and then divided; so in taking $\frac{1}{4}$ of 9 Hundred (in the Example toward the Left-hand) one Hundred remains, or four Quarters; which added to the 2 is 7 Quarters; $\frac{1}{4}$ of which is one Quarter, and three remains, or 84 Pound, and the 24 is 108 Pound, $\frac{1}{4}$ of which is 27, &c.

Case 3.] When the Tare to be allowed is 6*l.* per Hundred-weight.

Rule.] Take $\frac{1}{4}$ of the given Number, and $\frac{1}{4}$ of that fourth for four pound Tare: then to the last Quotient add half it self, and the Summ is the Tare required.

Or, as in the 4th Method: Multiply the Hundreds by 6; and so proceed as in the 4th Way of finding the Tare is directed, and in the Example.

Example.] What is the Tare of 6 Cask of Latin or Iron-wire, at 6*l.* per Hundred Tare?

By

Allowance for Tare.

By the 4th Way (by which this is best performed)

C. *Qrs. lb.*
 The Gross weight being 16 : 00 : 14
 6

lb. 96 is the Tare of 16 C.
 $\frac{1}{4}$ of 14 *lb.* ($\frac{3}{4}$ *lb.* being $\frac{1}{4}$ of 6 *lb.*
 as 14 *lb.* is $\frac{1}{4}$ of 112 *lb.*)

Total Tare = 96 $\frac{3}{4}$ *lb.*

Case 4.] When the Allowance for Tare is 7 l. per Cent.

Rule.] Take $\frac{1}{8}$ of 1 Eighth of the given Number for Tare.

Example.] What is the Tare of 9 C. 3 *Qrs.* 16 *lb.* at 7 l. per Hundred-weight. See the Work following.

C. <i>Qrs. lb.</i> 9 : 3 : 16 at 7 l. Tare	Or by the 4th Method C. <i>Q. lb.</i> Multiply } 9 : 3 : 16 at 7 l. 7
---	--

1 : 0 : 26 <i>lb.</i> _____	For 9 C. = 63 l. For 3 <i>Qrs.</i> = 5 $\frac{1}{4}$ l. For 16 <i>lb.</i> = 0 $\frac{1}{2}$ l. } Tare
Deduct 0 : 21 : 13 is $\frac{1}{4}$ of $\frac{1}{4}$ <i>lb.</i> _____	ing the Tare

Remainder 9 : 11 : 03 Nett. 697. Total Tare.

Case 5.] When the Allowance for Tare is 8 l. per Hundred-weight, as for Copper and Brimstone.

Rule.] Take $\frac{1}{4}$ of a Fourth of a given Number, and put it down twice, and the Summ is Tare.

Example.] What is the Tare of three Fats of Copper: *Viz.*

C. *Qr. lb.*
 N^o 7, 19 : 1 : 06
 9, 21 : 3 : 04
 13, 23 : 2 : 14

Or by the 4th Way.
 C. 64 : 2 : 24 Gross.

C. 64 : 2 : 24 = Total Gross

C. 16 : 0 : 20 = $\frac{1}{4}$ of the Gross

2 : 1 : 06 = $\frac{1}{4}$ of the 4th } Add

2 : 1 : 06 = $\frac{1}{4}$ of the 4th } Add

4 : 2 : 12 Total Tare

5 $\frac{1}{2}$ *lb.* Tare of 64 C.
 4 *lb.* Tare of the 2 *Qrs.*
 1 $\frac{1}{2}$ *lb.* Tare of the 24 *lb.*

4 27 Total Tare of Total Gross,
 or C. 42 $\frac{1}{4}$: 23 $\frac{1}{4}$, as
 before.

Case 6.] When the Allowance for Tare is 10 Pound per Cent.

Rule.] From $\frac{1}{4}$ of the Gross-weight, take $\frac{1}{4}$ of $\frac{1}{4}$ of the said Weight, and the Remainder is Tare.

But this Question is best performed by the 4th Way.

Example.] What is the Allowance for 14 C. 1 Qr. 10 lb. of Copperas, at 10 Pound per Hundred Tare?

C.	Q.	lb.
14	1	10
<hr style="width: 10%; margin: 0 auto;"/>		
10		

lb. 140 Tare of 14 C.

lb. $2\frac{1}{2}$ of 1 qr.

lb. $0\frac{1}{4}$ of 10 lb.

143 $\frac{1}{4}$ = Tare required.

Case 7.] When the Allowance for Tare is 12 l. per Cent. as of Alum, Salt-petre and Tallow.

Rule.] From $\frac{1}{4}$ of the Gross-weight, take $\frac{1}{4}$ of the Eighth, and the Remainder is Tare.

Example.] What is the Tare of 15 C. 3 Q. 16 lb. of Salt-petre at 12 l. per Cent.

C. Q. lb.

Gross 15 : 3 : 16 at 12 l. per Cent.

1 : 3 : 26 is $\frac{1}{4}$ of the Gross.

0 : 1 : 04 is $\frac{1}{4}$ of the 8th, which deduct from the $\frac{1}{4}$.

1 : 2 : 22 Tare required, deduct from the Gross.

Remains 14 : 0 : 22 Nett.

Case 8.] When the Allowance for Tare is 16 l. per Cent.

Rule.] Take $\frac{1}{4}$ of the given Number: (this being done best by the 3d way) and you have the Tare.

Exam-

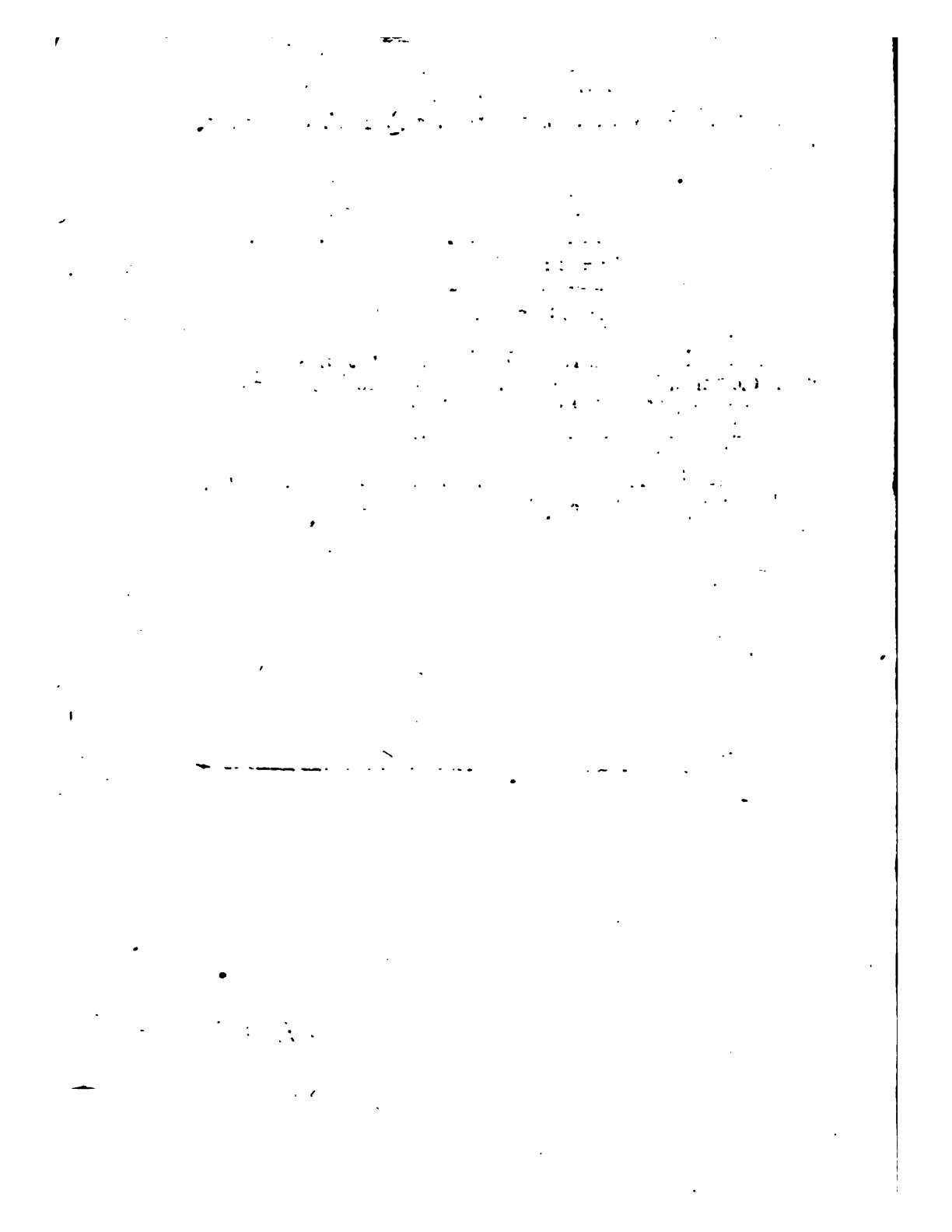
Allowance for Tare.

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Example.] What is the Tare of 10 C. 2 Q. 26 lb. of Currans, at 16 l. per Cent.

	C.	Q.	lb.	
Gross	10	2	26	at 16 l. Tare.
	$\frac{1}{4} = 1 : 2 : 3$			
Net =	9	0	23	

Thus have I given you Rules for deducting the usual Tares in most Commodities where 112 lb. is allowed to the Hundredweight; which Methods I refer to the Learner, as the best, being brief and commendable according to the Rules in Practice among the best Merchants, but if the Learner thinks the foregoing Method charges his Memory too much, he may use the following Table of the Decimal Parts of 112 lb. by which he will work Quarters of Hundreds and Pounds, as tho' they were Hundreds, as shall be shewn by several Examples following the Table.



A TABLE for the Speedy finding the Tare; shewing what Decimal Part of One Hundred any Number of Quarters and Pounds are.

Qr. lb.	C.	Qr. lb.	C.	Qr. lb.	C.	Qr. lb.	C.				
0	1	.0089	1	0	.25	2	0	.5	3	0	.75
	2	.0178		1	.2589		1	.5089		1	.7589
	3	.0267		2	.2678		2	.5188		2	.7679
	4	.0357		3	.2767		3	.5277		3	.7768
	5	.0446		4	.2857		4	.5367		4	.7857
	6	.0535		5	.2946		5	.5456		5	.7946
	7	.0624		6	.3035		6	.5545		6	.8036
	8	.0714		7	.3124		7	.5634		7	.8125
	9	.0803		8	.3214		8	.5724		8	.8214
	10	.0892		9	.3303		9	.5813		9	.8303
	11	.0982		10	.3392		10	.5902		10	.8392
	12	.1071		11	.3481		11	.5991		11	.8482
	13	.1161		12	.3570		12	.6081		12	.8571
	14	.1250		13	.3660		13	.6170		13	.8660
	15	.1339		14	.3749		14	.6259		14	.8750
	16	.1429		15	.3838		15	.6348		15	.8839
	17	.1518		16	.3927		16	.6438		16	.8928
	18	.1607		17	.4017		17	.6527		17	.9017
	19	.1697		18	.4106		18	.6616		18	.9107
	20	.1786		19	.4195		19	.6705		19	.9196
	21	.1875		20	.4284		20	.6795		20	.9285
	22	.1964		21	.4374		21	.6884		21	.9374
	23	.2054		22	.4463		22	.6973		22	.9464
	24	.2143		23	.4552		23	.7062		23	.9553
	25	.2232		24	.4641		24	.7152		24	.9642
	26	.2321		25	.4731		25	.7241		25	.9731
	27	.2411		26	.4820		26	.7330		26	.9821
				27	.4919		27	.7410		27	.9910

The Calculation of this Table.

This is no more than what is taught in Example 4. of Sect. 7. of Chap. 8. of this Book.

Example.] Admir I would know what Decimal part of a Hundred 2 Quarters 27 Pound is.

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In 2 quarters 27 pound are 83 pound, or $1\frac{1}{2}$ C. which by the Rule in the said seventh Section of Chap. 8, Example 1. is thus reduced to a Decimal.

$$\begin{array}{r}
 112 \ 83 :: 10000 \\
 \quad \quad \quad 83 \\
 \hline
 112) 830000 \text{ G.} \\
 \quad \quad \quad \dots \\
 \hline
 \quad \quad \quad 460 \\
 \hline
 \quad \quad \quad 120 \\
 \hline
 \quad \quad \quad 80
 \end{array}$$

By the Work you may see that the 2 quarters 27 pound is .7410 C. and is the Tabular Number, answering 2 quarters 27 pound; the Use of the Table in allowance for Tare is as followeth.

The Use of the Table foregoing.

Example 1.] What is the Nett-weight of the four Sacks of Cotton mentioned in Case 2: of this Section, the Gross-weight of which is 9 hundred, 3 quarters, 24 pound.

Rule.] Take the Decimal of 3 quarters 24 pound out of the Table, which is .9642: Then deduct four pound Tare from 112, and the Remainer is 108 Nett-pounds in 112 Gross, as we shewed before: Therefore multiply 9.9642 C. by 108, and the Product is Nett-pounds, and parts of a pound.

$$\begin{array}{r}
 9.9642 \text{ C.} \\
 108 \\
 \hline
 7.97136 \\
 99642 \\
 \hline
 1076.1336 \text{ Nett-pounds for Answer;}
 \end{array}$$

which is the same as in the said second Case of this Section, as you may prove by reducing that Nett-weight into pounds.

Exam-

It would be needless to give any more Examples of the deducting Tare, since by knowing the usual Tare for any Commodity according to the Custom of any Port, the Learner may by the help of the foregoing Rules, be able with Speed and Exactness, to make any Allowance desir'd. I shall therefore conclude this Section with one Example of Allowance for Tare and Trett.

Case. 11.] When Allowance is requir'd for Tare and Trett.

Rule.] Find what is to be allow'd for Tare according to the Rules foregoing, which having deducted, the Remainder (as was said at the beginning of this Section) is Suttle, which reduce into Pounds and divide by 26 (because that is $\frac{1}{4}$ part of 104,) and the Quotient is what is to be allow'd for Trett, which deduct from the Suttle, and the Remainder is Nett.

Example] What is the Nett-weight of the Puncheon of Pruons following, Allowance being made of 14 Pound at 112 for Tare, and four Pound at 104 for Trett?

C. 2. l.

1 Puncheon at 9, 2: 10 Gros at 14 Pound Tare *per Cent.*

$\frac{1}{4}$ is = 1: 0: 22 Tare deduct

Remains 8: 1: 16 Suttle.

8:

84

84

940 pound Suttle, which divide by 26, and you have
36 pound Trett, deduct.

904 pound Nett, For Answer.

Note, that Trett, and 2 pound at every 300 Weight for Draught, is usually allow'd in the Port of *London* for Cinnamon, Cloves, Mace, Tobacco, Cotton-Yarn, Cotton-Wool, and other Things that have Waste.

The Rule of Barter.

§. 3. Concerning Bartering.

Merchants are said to Barter, when they exchange one Commodity for another; but there is much more difficulty in the Name, than the Rule; for that is no other than the Rule of Proportion, which has been taught already, as will appear by the Example following.

Case 1.] When two Merchants Barter, and each rateth his Goods sold in Barter, as tho' they were sold for ready Money.

Rule.] Let one Merchant consider what the Goods he is minded to Barter amounteth to: Then, by the Rule of Proportion, see how much of the other Merchant's Commodity the said Amount will buy, and so much must be given.

Example.] A Merchant has 18 Hundred 2 Quarters of Coffee-berries, at 14 Pound 10 Shillings *per Cent.*, which he is willing to Barter with another Merchant for Lime-Juice, at 20 pence the Gallon; how much Lime-Juice must the second Merchant give the first for his Coffee-berries?

The Price of the first Merchant's Coffee is thus by Practice.

$$\begin{array}{r} \text{C.} \quad \text{Q.} \quad \text{l.} \quad \text{s.} \\ \text{Multiply} \left\{ \begin{array}{l} 18: 2 \text{ at } 14: 10 \text{ per Cent.} \\ 14 \end{array} \right. \end{array}$$

72
18

$$\begin{array}{r} \text{Add} \left\{ \begin{array}{l} 252 \text{ Pound at } 14 \text{ l.} \\ 9 \text{ l. at } 10 \text{ s.} \\ 7 \text{ l. } 5 \text{ s. for the half Hundred.} \end{array} \right. \end{array}$$

The Value of the Coffee 268 l. 5 s.

Then say 20 : 1 :: 268 : 57

5365
12

20) 64380 d. (3219 Gall.=Answer.

By

Merchants Accounts : Or, Barter. 123

By the Work I find, that if 20 Pence buy one Gallon of Lime-juice, 268 l. 5 s. or 64380 d. will buy 3219 Gallons: And so much the second Merchant gave the first for his Coffee-Berries.

Case 2.] When two Merchants Barter, and the one rateth his Goods above the common Price for ready Money, to know how the other Merchant may advance the Price of his Goods in proportion to the first Merchant, and how to Barter without Loss thereby.

Rule.] Consider what the first Merchant's Goods are worth per Integer in ready Money, and how much he advanceth the Price in Barter: Then say, If the Price of a Unit of the first Merchant's Commodity advance so much in Barter (mentioning the difference between his ready Money and Bartering Prices) how much must the Price of a Unit of the second Merchant's Commodity advance above the ready Money-Rate in Barter; which having found, Work according to the Bartering Prices of each, as in the last.

Example.] A Merchant hath 15 Hundred, 1 Quarter of Aleppo Gauls, which he valueth at 5 Pound 6 Shillings and 8 Pence per Hundred ready Money; but in Barter he will have 5 Pound 10 Shillings per Hundred: Another Merchant hath *Jambee* Pepper, at 14 Pence the Pound ready Money; how much Pepper must the second give the first for his Gauls, advancing his Price in Barter proportionably? Answer, 1394 $\frac{1}{4}$ Pound of Pepper. See the Operation.

l.	s.	d.	s.	d.	d.
5	6	8	3	4	14
20			12		40
106	Shill.		d. 40	d. 560	
12				4	
1280	d.		1280)	2240	Qrs. (17 $\frac{2}{3}$ or 17 $\frac{1}{4}$ Qrs.
				96	

Here you see, that if 5 l. 6 s. 8 d. (or 1280 d.) advance 3 s. 4 d. in Barter; then 14 d. must advance 1 $\frac{1}{4}$ Farthing. So that now the Gauls being 5 l. 10 s. or 1320 d. per Hundred, the Pepper is so be reckoned 14 d. 1 $\frac{1}{4}$ q, per Pound.

Exchange of Coin.

Then find the value of the Gauls, by adding the pence in 3 s. 4 d. to the foregoing 1280 d. which maketh 1320 d. by which multiply 15 Hundred 1 Quarter, (or 15.25, the Decimal of 1 Quarter being .25) and the Product is the value of the Gauls 20130 d. then find the Answer to the Question by the following Proportion, *viz.* If 14 d. $1\frac{1}{4}$ rs, buy one pound of Pepper; How many will 20130 d. buy?

d.	q.	l.	d.		
14	1	1	20130	15.25 C.	
4			4 Farthings	1320 d. per C.	
57 $\frac{1}{4}$ rs.			80520 Farth.	3050.	
				4575	
				1525	
				20130.00 d.	

Or $1\frac{1}{4}$ rs. By the First
Case of Reduction of Vulgar
Fractions.

Then by Division of Vulgar Fractions.

$$\frac{14}{4} \frac{20130}{1} \left(\frac{15.25}{100} \right) \text{ Answer.}$$

Which by the second Case of Reduction of Vulgar Fractions is 1394 $\frac{1}{11}$ pound of Pepper and so much must be given for the Gauls.

§. 4. Concerning Exchange of Coin.

IN this Section I shall endeavour, with what Brevity I can well, to take notice of several things, which other Authors, treating on this Subject have omitted: But which, I presume will be very practical and useful; and in doing thereof, shall discourse on these Heads.

1. What Exchange is.
2. The Subject of Exchange.
3. The Par of Exchange.
4. The Course of Exchange.
5. Some Reasons of the Rise and Fall of Exchange.
6. Give some Rules for keeping the Course near the Par.

L Exchange of things, is to give one thing for another; which is likewise called Barter or Commutation; But there the things exchanged are always of a different Species, as Wool for
Cloath,

Cloth, Silk for Stuff, &c. and when one is receiv'd, the other is deliver'd; or in ordinary Buying and Selling, Money is given for Goods, or Goods for Money; which is sometimes given the one immediately for the other; and sometimes the Money is paid by Contract, a certain time after the Goods are deliver'd, which is call'd Buying or Selling on Credit, or at Time: But Exchange (according to the ordinary Notion in Merchandizing) is to give Coin for Coin, *i. e.* the giving a Summ of Money in one place for a Bill, ordering the Payment of the like Summ (according to the Value agreed on) in another place. Now so often as these two places are in different Countries, the Exchange is Foreign, otherwise Inland: Of which, and of several Customs us'd among Merchants, with respect to Drawing and Accepting these Bills, and Paying and Receiving the Value therein, you have a large Account in Section the first of Chap. II.

II. Money (the Subject of Exchange) and Commerce are inseparable Companions; (of which we had too great Assurance in the late Regulation of Coin, where Trade decreased, as the Quantity of running Cash; tho' according to the Opinion of the Ingenious, Trade was first carried on without Money, every one being willing to give such Commodities as they were possessed of, for those of which they stood in need.

2. But because, by this means, Men could not at all times fit others occasions, it became necessary that the Receiver should deposit a Pledge with the Deliverer, to supply his Need on the like occasion. And the most proper Material for that was found to be Silver, because of its great Value among Men, not only by reason of its natural Perfections, as Cleanness, Unaptness to rust, Ponderousness, &c. but also of its being less common than other Metals, which gave it a just esteem among Traders, and was therefore pitch'd upon to be a Universal Pledge or Measure of all Commerce and Traffick which we find, in Sacred History, was so about 488 Year after the Flood.

3. But, to prevent the Receiver of this Silver being imposed on by the Deliverer incorporating too great a quantity of a Baser sort of Metal with his Silver (which is not easily discovered by the Eye) it became necessary the Fineness of Silver should be ascertained by every Government, and to have certain Quantities at certain Values.

4. And to save the trouble of Weighing and Assaying every Piece receiv'd, which would greatly obstruct the Dispatch of business, by which Men ordinarily grow Rich: It became customary for Princes to cause such and such Stamps to be given to the several Denominations or Quantities of Silver, to be a Voucher of the Weight and Fineness thereof, which was call'd Coin, *Moneta* or Money, and is the Condition we have it in at this day; the Antiquity of which stamping Money, we can trace no farther back than the *Romans* Time, among whom the Ingenious Mr. *Vauban* of *Greys Inn* tells us *Servius Tullius* was the first.

5. I proceed now to shew the Weight and Fineness of our own Coin here in *England*, and shall in the next Article or Head, shew how the Coin of other Nations agrees in Value thereto; as being something more brief and less troublesome for the Reader to apprehend, than to insert the Weight and Fineness of Foreign Coin, which I have done elsewhere.

6. Fine Silver being too Flexible for common use, either in Money or Utensils, made it necessary to harden the same, by mixing a small quantity of baser Metal therewith, as Copper or Brass; which is therefore called Alloy; and Money is said to be more or less fine, in proportion to the quantity of Alloy intermix'd with a certain quantity of fine Silver; Thus of a pound of Bullion; if two ounces thereof be Copper, &c. the Bullion is said to be 10 Ounces fine, and is not so Valuable as that which is 11 Ounces fine, i. e. that has but 1 Ounce of Alloy in it.

7. Hence it is evident, that *English* Silver being 11 $\frac{3}{4}$ *dw* fine, i. e. having but 18 *dw*. of Alloy in 12 Ounces of Bullion, a Pound thereof is more Valuable than a Pound of that which is but nine Ounces fine; as the *Dutch*; or 10 Ounces fine, as the *French*, &c.

8. *English* Silver is call'd Sterling (as most believe from the name of the first Coiners thereof, who were sent for from the Eastern parts of *Germany* by King *Richard I.* and were called *Easterlings*.) And all Bullion, having but 18 *dw*. of Alloy in 12 Ounces of Bullion is said to be Sterling fine.

9. The Fineness of *English* Gold is distinguish'd or ascertain'd by the Caract, viz. 12 Ounces of Bullion is divided into 24 equal parts, each of which is one Caract, and each Caract into 4 Grains; of which 24 Caracts, two are Alloy; so that there is 22 Caracts of fine Gold, and 2 Caracts of Alloy to the Standard of Gold in *England*, which is 22 Caracts fine.

Of Money, the Subject of Exchange 127

10. *English* Gold and Silver are weigh'd by *Troy-weight*, *viz.* Pounds, Ounces, dw. (or Penny weights) and Grains; and according to the common Price of Gold and Silver Bullion at present, (which on extraordinary occasions does sometimes rise and fall, but not as other things do) the Weight and Value is as follows.

Of Silver Bullion.

	<i>l.</i>	<i>s.</i>	<i>d.</i>	<i>grs.</i>
The Grain =	00	00	00	00 $\frac{1}{2}$
D. weight =	00	00	03	00
Ounce =	00	05	00	00
Pound =	03	00	00	00

Of Gold Bullion.

	<i>l.</i>	<i>s.</i>	<i>d.</i>
The Grain =	00	00	02
D. weight =	00	04	00
Ounce =	04	00	00
Pound =	48	00	00

11. Having shew'd the Value of the several Denominations of Weight of Bullion; I come next to shew the Value, Fineness and Weight of our Silver and Gold Coin, *viz.*

Silver Coin calculated according to the Standard of the Mint, (12 Ounces of Bullion being Coined into 62 s. at which Rate the Crown piece is 19 dw. 8.51612903225, &c. Grains) is as follows.

Current Value of Coined Pieces.	Value as Bullion at 4 s. per Ounce.	Weight of Coined Pieces.	Fineness.
<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i> <i>gr.</i>	<i>dw.</i> <i>gr.</i>	
5 : 00	4 : 10 : 0 $\frac{1}{2}$	19 : 08 $\frac{1}{2}$	
2 : 06	2 : 5 : 0 $\frac{1}{4}$	9 : 16 $\frac{1}{2}$	3 dw.
1 : 00	0 : 11 : 2 $\frac{1}{2}$	3 : 20 $\frac{1}{2}$	11 : 02
0 : 06	0 : 5 : 3 $\frac{1}{4}$	1 : 32 $\frac{1}{2}$	
0 : 04	0 : 03 : 3 $\frac{1}{4}$	1 : 06 $\frac{1}{2}$	
0 : 03	0 : 03 : 3 $\frac{1}{4}$	0 : 23 $\frac{1}{2}$	
0 : 02	0 : 01 : 3 $\frac{1}{4}$	0 : 15 $\frac{1}{2}$	
0 : 01	0 : 00 : 3 $\frac{1}{4}$	0 : 07 $\frac{1}{2}$	

Gold

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Gold Coin Calculated according to the Standard of the Mint, 12 Ounces of Bullion being Coined into 44½ Guineas; at which rate the Guinea will weigh 5 *dw.* 9.4382, &c. Grains, and the other Pieces are for Weight and Value, according to the subsequent Table.

Pieces.	The Cur Value at			Value as Bul			Weights of			Fineness.
	Rate.	Standard	Pieces.	lion at 4 l.	per Ounce.	Pieces.	dw.	gr.		
	l. s. d.	l. s. d.	l. s. d.	l. s. d.	qr.	gr.	dw.	gr.		
The Guinea	1:01:06	1:00:00	1:01:06	3	0:05:09	3			} 22 Car- racts or 11 3	
The 5 Guin. Piece	5:07:06	5:00:00	5:07:10	1	1:06:23	1				
The 3 Guinea	0:10:09	0:10:00	0:10:09	1	0:02:16	7				
Car. or Fac. broad 20 s. Pieces	1:03:06	1:00:00	1:03:00	—	0:05:18	—				
Fac. broad Pic. with the Scept.	1:05:06	1:02:00	1:05:00	—	0:06:06	—				

There are other Denominations of *English* Gold, as the Angel Gold, or Rose Nobles, 23 Caracts, 3½ Grains fine; and the Pieces of different Weight, from 7 *dw.* 6 *gr.* to 9 *dw.* 18 *gr.* as also the Sovereign Gold, or 20 *s.* Pieces of *H. VIII.* but 20 Caracts fine, which I think it not proper to say more of, there being few or none to be seen Current now.

12. There are also made Current the *French* and *Spanish* Pistoles about ½ a Grain worse than Crown Gold, and the Weight being 4 *dw.* 8 *gr.* the Value thereof, at 4 *l.* the Ounce, is 17 *s.* 4 *d.* each, but they have through Custom long passed Current among us for 17 *s.* 6 *d.* tho' their real Value in proportion to Guineas at 20 *s.* is but 16 *s.* 1½ *d.* but if we allow them in proportion to our Current Value, and give them the same privilege (which Foreign Nations will not do in taking our Money) then in proportion to a Guinea at 21 *s.* 8 *d.* the Pistole should go but for 17 *s.* 4 *d.* exactly; for as 5 *dw.* 9 *gr.* the Weight of a Guinea is to 21 *s.* 6 *d.* its Current value; so is 4 *dw.* 8 *gr.* to 17 *s.* 4 *d.*

It's true, the justest measure in taking and paying Foreign Coin, whether Gold or Silver (when the Fineness is known) is to be govern'd by the Price of Gold and Silver Bullion, which might once in a Week be affixed on the Exchange, or publish'd in the Gazette, and at the Rate of Gold Bullion from 3 *l.* 10 *s.* to 4 *l.* the Ounce, Pistoles are in Value as follows, supposing them

Of the Proportions between Gold and Silver. [129]

them of equal Fineness with Crown Gold; above which Rate or Proportion they ought never to be Current, so long as Guineas do not go at above 21 s. 6 d. But if we value Pistols at a greater Rate than our own Guineas, we shall have little but the former Current.

<i>The Value of an Ounce of Gold, being</i>	<i>The Span. or French Pi- stole is worth</i>
l. s.	s. d.
3 : 10	: 15 : 2
3 : 11	: 15 : 4 $\frac{1}{2}$
3 : 12	: 15 : 7 $\frac{1}{4}$
3 : 13	: 15 : 9 $\frac{3}{4}$
3 : 14	: 16 : 0 $\frac{1}{2}$
3 : 15	: 16 : 2 $\frac{3}{4}$
3 : 16	: 16 : 5 $\frac{1}{2}$
3 : 17	: 16 : 8
3 : 18	: 16 : 10 $\frac{1}{2}$
3 : 19	: 17 : 1 $\frac{1}{2}$
4 : 00	: 17 : 4

Note also, that in proportion to Guineas passing Current at 21 s. 6. the broad Gold is worth but 23 s. And a Jacobus 25 s.

But since my writing what is above; Pistoles are by a Proclamation, Dated in *January 1707*. not to go Current at more than 17 s. nor are they worth that, so often as Gold Bullion is under 3 l. 19 s. 0. *per 3*, as may be seen by the foregoing Table; and I am of Opinion, we shall have few Current, because as they come in to the Bankers, the heaviest will probably be Coin'd into Guineas, there being a small matter to be got thereby, Gold being at 4 l. the 3, and the Coinage no Charge.

14. They that consider the proportion between Gold and Silver, (which may likewise be gathered from the foregoing Table) ought necessarily to mention whether of the Analogy of Weight (Bulk for Bulk) or of Value, and at what price they rate each; whether that price be of fine Gold or fine Silver, or alloy'd; and whether they mean the price as Bullion at present, or at the Standard Rate, otherwise their Calculation must be uncertain, and they leave the Reader in the dark; therefore to make this matter plain, I have inserted the Proportions following, being all the Cases I could think useful.

1. The Weight of fine Silver to that of fine Gold (Bulks alike) is,
As 1 to 1.83896, &c.
2. Fine Silver to fine Gold, calculated from the Standard Rate, the Pound of fine Gold being worth 48 l. 10 s. 10 d. and fine Silver 3 l. 6 s. 11 $\frac{1}{2}$ d. is,
As 1 to 14.49, &c.
3. Sterling Silver to Crown Gold at Standard Value of 44 $\frac{1}{2}$ Guineas the Pound of Gold, and 3 l. 2 s. the Pound of Silver, is,
As 1 to 15.431, &c.
4. Sterling Silver at 5 s. the Ounce to Crown Gold at 4 l. the Ounce is,
As 1 to 16.
5. Sterling Silver to Crown Gold, according to the now current Value of Silver and Gold 129.4 Grains of Gold passing current for 21 s. 6 d. and 19 *dw* 8 $\frac{1}{2}$ Grains of Silver running at 5 s. is,
As 1 to 15.4354.
6. Fine Gold to Crown Gold, is in Value,
As 1 to .9167, &c.
7. Fine Silver to Sterling Silver, is in Value,
As 1 to .9260, &c.

And from these several Proportions may be deduc'd many useful things relating to the Weight, Fineness and Valuation of Gold and Silver. But such as desire to see the Proportions that have been formerly between Gold and Silver (as to Value) both in this and other Nations, may read the account in *Lex Mercat.* page 213, &c. Mr. *Vaughan's* Coin and Coinage, p. 19; and especially Mr. *Lownd's* accurate Report thereof to the Lords of the Treasury, p. 35 to 59 of his Essay for the Amendment of the Silver Coin; but I think none of these contain any thing of the Nature with those above.

III. I am next to consider the Par of Exchange, and to know what is meant by it, this will be easie, if you know what it is to exchange, for when he to whom a Bill is payable receives of the Acceptor just so much Money in Value (Weight and Fineness consider'd) as was paid to the Drawer by the Remitter, then the Exchange is according to Par, *viz.* *Par pro Pari*, or Value for Value. But before it can be known whether an *English* Merchant in his Exchange to any foreign Place or Country gains or loseth by that Exchange, by paying less or more than the Par of the Money of the Place he exchangeth to (which he often does considerably, as will appear by the following Sections of this Chapter) he must necessarily know the Value of the foreign Coins

in

Of the Par of Foreign Coin in Sterling. [131]

in *English Money*, for which Reason I have inserted the Tables following, which contain the Values (according the best Account I can procure) at least of all those Denominations of Foreign Coin, in which Exchanges are made with *England*.

2. The Denominations *England* exchangeth in with other Countries, are in Pounds with *Rotterdam, Amsterdam, Antwerp* and *Hamburg*; in Pence with *Paris, Caler, Madrid, Genoa, Leghorn, Venice*, and all other parts of *France, Spain* and *Italy*; in Shillings and Pence with *Lisbon, Oporto*, and the rest of *Portugal*; and by the Hundred Pounds with *Ireland*. And in what Denominations they exchange with us, you will see in the next Section.

3. The Value of Foreign Coins, real and imaginary, in Sterling, according to the reputed Par, is as followeth.

		<i>English Money.</i>			
		s.	d.	q.	
<i>French</i> Coin.	{	1 Denier is Sterling	00	: 00	: 00 $\frac{1}{2}$
		12 Deniers, or 1 Soulz is	00	: 00	: 03 $\frac{1}{2}$
		20 Soulz, or 1 Lievre is	01	: 06	
		3 Lievres, or 1 Crown <i>French</i> is	04	: 06	
<i>Holland and</i> <i>Flanders</i> Coin.	{	1 Stiver is Sterling	00	: 01 $\frac{1}{2}$	
		5 Stivers is	00	: 06	
		6 Stivers, or 1 Shilling <i>Flemish</i> is	00	: 07 $\frac{1}{2}$	
		20 Shillings <i>Flemish</i> is Sterling	12	: 00	
		33 Shillings 4 d. <i>Flemish</i> is Sterling	20	: 00	
		1 Gilder, or 20 Stivers is	02	: 00	
<i>Spanish</i> Coin.	{	1 <i>Zealand</i> , or common Doller	03	: 00	
		1 Duccatoon	05	: 06	
		1 Specie Doller	05	: 00	
		13 $\frac{1}{10}$ Malvadies of <i>Spain</i> is Sterling	00	: 00 $\frac{1}{2}$	
		372 Malvadies, or 1 Ryall is	00	: 06 $\frac{1}{4}$ qrs.	
<i>Portugal</i> Coin.	{	8 Ryals, or a Piece of Eight <i>Sevil</i> is	04	: 06	: 11 $\frac{1}{1000}$
		1 Piece of Eight <i>Mexico</i> is	04	: 06	: 1 $\frac{1}{2}$
		Ditto <i>Peru</i> is	04	: 05	: 1 $\frac{4}{1000}$
					: 3 $\frac{1}{1000}$
<i>Portugal</i> Coin.	{	12.42 Rees of <i>Portugal</i> is Sterling	00	: 01	
		1 Mill Ree, or 1000 Rees is Sterl.	06	: 08 $\frac{1}{2}$	
		1 Testoon is	01	: 03	

[132] *Of the Par of Foreign Coin in Sterling.*

		s.	d.	q.			
Italy and Venice Coin.	}	1 Lievre at Leghorn is Sterling	00	09			
		1 Crown current at Florence	05	03			
		1 Ducat de Banco at Venice	04	04			
		1 St. Mark	02	10			
		1 Palermo Florin is 6 Tari, or	02	06			
German Coin.	}	1 Old Rix Dollar of the Empire	04	06			
		32 s. at Hamburg	20	00			
		1 Gilder of Norenburg is	07	01			
3 dw.							
The Fine- ness of a Piece of Eight,	}	Pillar Sevil Mexico Peru	} being	} And the weight	4 : 6 : 3 $\frac{168}{1000}$		
					} Of it 17 dw. 12	4 : 6 : 1 $\frac{968}{1000}$	
						} gr. the Value is	4 : 6 : 1 $\frac{7}{1000}$
							4 : 5 : $\frac{488}{1000}$

I have been more exact in the Calculation of the Value of these Pieces of Eight, by reason they are so universally used in most Foreign Trafficks.

4. And as there is a Par of Money, so there is an Equation of Weights and Measures with the *English*, which is very useful in knowing how to value Foreign Goods, by reducing the Quantity to *English* Weight or Measure, and the contrary to value *English* Commodities, by reducing them to Foreign Weights and Measures, for which purpose I have inserted these Tables.

Value of Coins in America by Law. [133]

By a Proclamation, dated June 18. 1704. for ascertaining the Current Rates of Foreign Coins in Her Majesty's Colonies and Plantations in America, confirmed by Act of Parliament Anno 6. Ann. the same as follows.

	Weight	True	Current Value
	dw. gr.	s. d.	not to exceed s. d. q.
Sevil Pieces of Eight (old Plate)	17 : 12	4 : 6	6 : 00 : 0
Ditto new Plate	14 : 00	3 : 7 $\frac{1}{4}$	4 : 09 : 2 $\frac{3}{4}$
Mexico Pieces of Eight	17 : 12	4 : 6	6 : 00 : 0
Pillar Pieces of Eight	17 : 12	4 : 6 $\frac{1}{4}$	6 : 00 : 0
Peru Pieces of Eight (old Plate)	17 : 12	4 : 5	5 : 10 : 2 $\frac{3}{4}$
Cross Dollars	18 : 00	4 : 4 $\frac{1}{4}$	5 : 10 : 1 $\frac{1}{4}$
Duccatoons of Flanders	209 21	5 : 6	7 : 04 : 0
Ecu's of France (or Silver Lewis)	17 : 12	4 : 6	6 : 00 : 0
Crusadoes of Portugal	11 : 4	2 : 10 $\frac{1}{4}$	3 : 09 : 2 $\frac{3}{4}$
Three Gilder Pieces of Holland	20 : 7	5 : 2 $\frac{1}{4}$	6 : 10 : 3 $\frac{3}{4}$
Old Rix Dollars of the Empire	18 : 10	4 : 6	6 : 00 : 0

The Half, Quarters, and other Parts, in proportion to their Denominations; and light Pieces in proportion to their Weight.

And to remedy the Inconveniency which was caused by the different Rates, at which Pieces of the same Species were Current, It was order'd by the said Proclamation, and confirmed by the said Act; That after *January 1. 1704.* no *Sevil, Pillar, or Mexico Pieces of Eight*, tho' of full Weight as above, shall be received or paid at above 6 s. per Piece, and the Half, Quarters, and other lesser Pieces, in proportion. And the Currency of all the other Pieces abovemention'd, not to exceed the same proportion.

And the said Act enjoins, That if any one shall receive, or pay any of the Pieces for more than as above, they shall forfeit 10 l. and suffer 6 Months Imprisonment.

Note, The Proportions above (of the current Value) are computed from the intrinsick Value of the Pieces of Eight, *Sevil or Mexico.*

[134] Foreign Weight and Measure in English.

One Ell English is,		1 Pound Averdupoize, is, of
I n Flanders as at Antwerp	1.66	Ells _____ their lb.
_____ Bridges	1.64	Ells _____ 0.96
In Holland as at Amsterdam, Linnen	1.69	Ells _____ 0.98
In France as at Paris	0.95	Aulns _____ 0.9
_____ Lyons	1.016	Aulns _____ 0.89
_____ Callis	1.57	Aulns _____ 1.07
_____ Rouen	1.0	Aulns _____ 0.88
In Italy as at Venice	1.96	Braces _____ 0.94
_____ Leghorn	2.0	Braces _____ 1.28
_____ Millan	2.3	Braces _____ 1.37
In Germany as at Bremen	2.03	Ells } _____ 0.92
_____ for Ozinbrig Linnen	1.05	Ells } _____ 0.81
_____ at Vienna for Linnen	1.28	Ells } _____ 0.92
_____ Woollen	1.41	Ells } _____ 0.92
_____ at Leipzig for Linnen	1.75	Ells } _____ 0.92
_____ Woollen	3.0	Ells } _____ 0.92
Denmark as at Hamburg for Linnen	2.07	Ells } _____ 0.92
_____ Woollen	2.03	Ells or .017 shocks _____ 1.16
In Poland as at Danzick	2.03	Ells or .017 shocks _____ 1.2
_____ Cracow	2.03	Ells _____ 1.16
In Sweden as at Stockholm	2.07	Ells _____ 1.16
_____ at Riga	2.07	Arfins _____ 1.16
_____ Narus	2.07	Vares } _____ 0.88
In Portugal as at Lisbon for Linnen	1.025	Covados } _____ 1.08
_____ Woollen	1.66	Vares _____ 0.95
In Spain as at Barcelona	0.71	Vares _____ 0.88
_____ Malaga	1.043	Archins _____ 0.027 Pood.
_____ Cadix	1.35	_____ 0.027 Bercovet.
In Muscovy as at Archangell, &c.	1.61	

How our English Yard agrees with other Country Measures, See [Yard] in the Dictionary; and the Values of most other Weights, Measures, Coins, &c. not here mentioned may be found there.

The Use of this Table, is,

Admit I would reduce 11465 Aulns of Lyons into Ells English. By the Table I find that 1.016 Aulin is 1 English Ell, therefore say,

$$\begin{array}{r} \text{Aulin} \quad \text{Ell} \quad \text{Aulns} \quad \text{Ells} \\ 1.016 \quad 1 :: 11465 \quad 11284.44 \text{ Answer.} \end{array}$$

5. Tables of Turkey Weights, of which the proportion between a Turkey and English Dram I received from a Book-keeper to a Turkey Merchant, which I have reduced to English Weight, as followeth.

A Table

Turkey Measure in English:

[135]

A Table of Aleppo Weights.

	Drams Aleppo	Drams English	lb. oz. dr.
1 Rottello =	720	=1260 =	4 : 14 : 12
1 Rottello =	700	=1227 =	4 : 12 : 11
1 Rottello =	680	=1194 =	4 : 10 : 10
1 Kintall =	68000	=119231 =	465 : 11 : 15

A Table of Smyrna Weights.

	Smyrna Drams.	English Drams.	English l. oz. dr.
	0.57 =	1 or =	00 : 00 : 01
	1.00 =	1.753 =	00 : 00 : 01 ³ / ₄
	146.0 =	256.0 =	01 : 00 : 00
1 Rottello =	180 =	315 =	01 : 03 : 11
1 Oke of =	400 =	701 =	2 : 11 : 13
1 Oke of =	250 =	438 =	1 : 11 : 06
1 Oke of =	120 =	210 =	0 : 13 : 02
1 Kintall =	18000 =	31545 =	123 : 02 : 09
1 Kintall =	17600 =	30844 =	120 : 07 : 12
1 Batman =	2400 =	4207 =	16 : 06 : 15
1 Chique =	800 =	1402 =	5 : 07 : 10

6. The Construction and Use of the Table of Aleppo Weights.

The true *Aleppo* Rottello is 720 Drams, and is equal to 4 *Smyrna* Rottellos, and by this Rottello all Goods of *Aleppo* are weigh'd.

By the R of 700 Drams, white Silk is only weigh'd.

By the R of 680 Drams, *Persia* Silk, as *Legee* and *Ardafs* are paid for, but they are weigh'd by the R of 700 Drams.

The Reduction of these Weights will be easy to all that understand but Multiplication and Division; for any Number of *Smyrna* R (or Rottello's) are reduc'd to *Aleppo* R by dividing by 4; and the *Aleppo* into *Smyrna* by multiplying by 4. Or the R of 720 Drams are reduc'd to those of 680, by multiplying the given R by 720 or 18, and dividing by 680, or by 17 respectively, and the contrary for reducing R of 680, to those of 720 Drams. For as 680 to 720, so is 17 to 18.

7. The Construction and Use of the Table of Smyrna Weights.

By the Oke of 400 Drams are weigh'd Cloves, Mace, Pepper, Benjamin, Gum-Arabick, Sea-Horse Teeth, Galbanum, Ginger, Indigo, Gum-tragant, Vachetoes, White Cordefant, Scammony, Wormseed, Coucheneal, Salsa Parella, Nutmegs, Cinnamon, Rhubarb, Senna and Cassia.

By

[136] *Use of the Tables of Turkey Weight.*

By the Oke of 250 Drams is weighed Opium. And by that of 120 Drams, Saffron.

There are 2 sorts of Kintals; The first containing 45 Okes of 400 Drams each or 18000 *Smyrna* Drams. By which Kintal are weighed Gauls, Alum, Cotton-Yarn, Lead, Brazile-wood, Valonia Logwood, Steel, Sugar, Bees-Wax and Gum Almonds.

The second Kintal contains 44 Okes of 400 Drams each, or 17600 *Smyrna* Drams, by which they weigh Cotten-Wool, Sheeps Wool, Tin, Box-wood and Anise-seeds.

The Batman contains 6 Okes of 400 Drams each, or 2400 Drams, by which they weigh Legee, Ardafs and Sherbafee-Silk.

The Chique contains 2 Okes of 400 Drams each, by which they weigh Goats-Wool.

The Use of the Table of Smyrna Weight.

If you would reduce any kind of Merchandize, which you have weighed to you in this Weight, either into some other Denomination of *Turkey*, or into *English* Weight, this is the

General Rule] Multiply the Number given by the Tabular Number answering a Unit of the same Denomination, and divide the Product by the Tabular Number answering to a Unit of the Denomination, into which you would reduce the given Number, and the Quotient is the Answer: Always observing to multiply and divide by the *Smyrna* Weight, when you would reduce into *Smyrna* Weight. And to multiply the Number given by the *English* Drams in a Unit of that Denomination, and afterward reduce those Drams into Pounds.

Example.] In 470 Okes of Saffron, each 120 Drams, how many Rottello's?

Rule.] Multiply 470 by 120, and the Product divide by 180, and the Quotient is Rottello's 313 $\frac{1}{3}$.

Or if you would reduce the 470 Okes into Pounds *English*; multiply the same by 210, *English* Drams in that Oke, and the Quotient is *English* Drams for Answer, which reduce into *English* Pounds, thus;

470 Okes given.
210 Drams in the Oke.

47

94

16) 98700 Drams Engl. (6168 (389:08:12 Answer.
12 Drams rem. 8 gr. rem. " 8. As

Of Calculating the Par of Exchange. 129

8. As to calculating the Par of Money; tho' there is more difficulty in this matter, than most People imagine, yet I do not find that any one has discuss'd it so plain to a mean Capacity as might be wish'd; but since it is a thing that ought to be certainly known and understood, because of great use among Merchants, I have for their Sakes (for whose Service this whole Treatise is calculated) made the thing as plain as I can, as follows.

9. The first thing then to be consider'd, is, that all foreign Coin is Bullion to us, and ours Bullion to them, so that the extrinick Value is not to be regarded in computing the Par of Exchange.

10. The second thing considerable, is the Fineness of our own Coin, and the Weight and Fineness of the Foreign, which we are to receive in Exchange; and this Knowledge of the Foreign must be acquired either to be so by the Experience of some authentick Author, or by the Merchants actual Assaying and Weighing of some of the same Pieces.

Thus for Example. Admit it were required to know how much Sterling Bullion or Coin may be given for 1000 pieces of Eight *Sevil*. 3 *dw.*

The Fineness of our own Coin I know is ————— 11 : 2

And the Fineness of a piece of Eight, I find to be — 11 : 3

And its Weight 17 *dw.* 12 *grs.*

Or the Weight of 1000 pieces I find ————— 875 : 0

11. The third thing is to know how many Ounces of Silver 11 Ounces 2 *dw.* fine, is equal to 875 Ounces of 11 Ounces 3 *dw.* fine, which is found by single indirect Proportion, thus,

$$\begin{array}{ccc} 3 \text{ dw.} & 3 & 3 \text{ dw.} & 3 \\ 11 : 2 & :: & 11 : 2 & \end{array}$$

11 : 2. 875 :: 11 : 2. 878.94144 Answer.

Here I find that I may give 878.94144 Ounces of Bullion 11 Ounces 2 *dw.* fine, for 875 Ounces of Bullion of 11 Ounces; 3 *dw.* fine, (or for 1000 pieces of Eight *Sevil*) which if I pay in Coin, I must for the 1000 pieces of Eight, pay 227*l.* 1*s.* 2*d.* Sterling, for,

Grains	l. Sterl.	Grains	l. Sterl.
1858.0645	. 1 ::	421891.89	. 227.359.

That is to say; as 1858.0645 (the Grains in 1 pound Sterling) is in proportion to 1 pound Sterling;

So is 421891.8912 the Grains in 878.94144 Ounces of Bullion 11 Ounces 2 *dw.* fine, which are equal in Value to the 1000 pieces of Eight. S To

To 227.059 *l.* Sterling, or 227 : 1 *s.* 02½.

But so often as I can buy 878.941 Ounces of Bullion for less than 227 *l.* 1 *s.* 2½ *d.* (which I can always do so often as Sterling Silver is under 5 *s.* 2 *d.* *per* Ounce) so often I gain, by making my Exchange in Bullion: As suppose I can buy Bullion for 5 *s.* 1 *d.* *per* Ounce, at that Rate the 878.941 Ounces (which I am to give for the 1000 pieces of Eight) will stand me in 223 *l.* 7 *s.* 11 *d.*½. which is less than 227 *l.* 1 *s.* 2½ *d.* (the Sum I pay Exchanging in Coin) by 3 *l.* 13 *s.* 2½ *d.* which is my Gain by exchanging in Bullion. And thus in Exchanges the Par of Money and Bullion ought to be considered, as well as the Par of the Domestick and Foreign Coins.

13. But tho' the foregoing Rules contain a true Method of calculating the Par of Money, yet since the Price of Exchange is generally agreed on, that so many Pence or Pounds Sterling shall be paid for a Piece of Eight, or other Denomination of Foreign Coin, it is also useful and very satisfactory to know how much Sterling Money each of those Foreign Pieces are worth, and for this reason I have in the foregoing Table, under Article the 3d of the general Head, of the Par of Exchange, shewed the true Value of each Piece of Foreign Coin; so that by inspection the Merchant may know (when a Bill is drawn on him, by seeing the Price Current of Exchange) whether that Price (called the Course of Exchange, which I shall speak to next) be above or below the Par, and consequently whether himself or the Nation gain or lose thereby.

IV. The Course of Exchange is the current or running Price of Exchange to all Places where there is any, which is sometimes above, sometimes below the Par, according as the same is influenced by the Accidents and Circumstances of Trade and Nations, and this differs only from the Par in this: That the Par of Exchange shews what other Nations should allow in Exchange, which is certain and fixed. But the Course shews what they will allow in Exchange; which is uncertain and contingent.

2. And tho' there are Tables of the Course of Exchange published once or twice every Week, yet I find the generality of Persons ignorant of the meaning thereof, which induced me to explain the same as followeth.

The Course of Exchange.

131

The Course of
Exchange Oc-
tob. 20. 96.

Par of Ex-
change,

Amsterdam	— 31 s. 06 d. Flemish for 1 l. Sterling	— 33 s. 4 d. Flem.
Rotterdam	— 31 s. 08 d. Flemish for 1 l. Sterling	— 33 s. 4 d. Flem.
Antwerp	— 31 s. 05 d. Flemish for 1 l. Sterling	— 33 s. 4 d. Flem.
Hamburgh	— 30 s. 04 d. for 1 l. Sterling	— 32 s. 0
Madrid	— 56½ d. Sterling for 1 piece of 8 Mex.	54½ d. Sterl.
Cales	— 56½ d. Sterl. for 1 piece of 8 Mex.	54½ d. Sterl.
Genoa	— 62½ d. Sterl. for 1 piece of 8 Mex.	54½ d. Sterl.
Leghorn	— 62½ d. Sterl. for 1 piece of 8 Mex.	54½ d. Sterl.
Venice	— 59½ d. Sterl. for 1 Ducat	— 52½ d. Sterl.
Paris	— 51 d. Sterl. for 1 Crown French	— 54 d. Sterl.
Lisbon	— 6s. 6d. Sterl. for 1 Millree	— 6s. 08½ d. Ster.
O-Porto	— 6s. 5d. Sterl. for 1 Millree	— 6s. 08½ d. Ster.

Note, That Bills are usually drawn to and from *Dublin* in *Ireland*, payable at 21 Days. And the Exchange sometimes 8, 9, 10, &c. Pounds *per. Cent.* allowed for Return.

The Table is so plain, it needs no Construction, for it shews that on the 20th of *October*, 1696. the Course of Exchange to *Amsterdam* was 31 s. 6 d. *Flemish*, for 1 pound Sterling, which is 1 s 10 d. *Flemish per Pound* lost to us, it being so much under the Par, or 33 s. 4 d. and so of the rest.

3. A TABLE Shewing how much Sterling Dollars, Ducats, Pieces of Eight, Flemish-

	At 48 d. per ps.	At 49 d. per ps.	At 50 d. per ps.	At 51 d. per ps.	At 52 d. per ps.	At 53 d. per ps.	At 54 d. per ps.	At 55 d. per ps.	At 56 d. per ps.
	l.	l.	l.	l.	l.	l.	l.	l.	l.
1	000.2	000.204	000.208	000.212	000.217	000.221	000.225	000.229	000.233
2	000.4	000.408	000.417	000.425	000.433	000.442	000.45	000.458	000.467
3	000.6	000.612	000.612	000.637	000.65	000.667	000.675	000.687	000.7
4	000.8	000.816	000.833	000.85	000.867	000.883	000.9	000.917	000.933
5	001.0	001.021	001.042	001.062	001.083	001.104	001.125	001.146	001.167
6	001.2	001.225	001.25	001.275	001.3	001.325	001.35	001.375	001.4
7	001.4	001.429	001.458	001.487	001.517	001.546	001.575	001.604	001.633
8	001.6	001.633	001.671	001.7	001.733	001.767	001.8	001.833	001.867
9	001.8	001.837	001.875	001.912	001.95	001.937	002.025	002.052	002.1
10	002.0	002.042	002.083	002.125	002.167	002.208	002.25	002.292	002.333
20	004.0	004.083	004.167	004.25	004.333	004.417	004.5	004.583	004.667
30	006.0	006.125	006.25	006.375	006.5	006.612	006.75	006.875	007.0
40	008.0	008.167	008.333	008.5	008.667	008.833	009.0	009.167	009.333
50	010.0	010.208	010.417	010.625	010.833	011.042	011.25	011.458	011.666
60	012.0	012.25	012.5	012.75	013.0	013.25	013.5	013.75	014.0
70	014.0	014.292	014.583	014.875	015.167	015.458	015.75	016.042	016.333
80	016.0	016.333	016.667	017.000	017.333	017.666	018.0	018.333	018.667
90	018.0	017.375	018.75	019.125	019.5	019.875	020.25	020.625	021.0
100	020.0	020.417	020.833	021.25	021.667	022.083	022.5	022.917	023.333
200	040.0	040.833	041.667	042.5	043.333	044.167	045.0	045.833	046.667
300	060.0	061.25	062.5	063.75	065.0	066.25	067.5	068.75	070.0
400	080.0	081.667	083.333	085.000	086.666	088.333	090.0	091.667	093.333
500	100.0	102.083	104.167	106.25	108.333	110.417	112.5	114.583	116.667
600	120.0	122.5	125.000	127.5	130.0	132.5	135.0	137.5	140.0
700	140.0	142.917	145.833	148.75	151.666	154.583	157.5	160.416	163.333
800	160.0	163.333	166.667	170.0	173.333	176.667	180.0	183.333	186.667
900	180.0	183.75	187.5	191.25	195.0	198.75	202.5	206.25	210.0
1000	200.0	204.167	208.333	212.5	216.666	220.833	225.0	229.167	233.333
2000	400.0	408.333	416.667	425.0	433.333	441.667	450.0	458.333	466.667

Pieces of Foreign Coins

Money is contain'd in any Number of Crowns, Pounds, &c. from 1 to 2000.

Pieces of Foreign Coin,	At	At	At	At	At	At	At	At	At
	57 d.	58 d.	59 d.	60 d.	33 s.	d. 4	½ d.	¼ d.	⅓ d.
	per ps.	per ps.	per ps.	per ps.	per ps.	per ps.	per ps.	per ps.	per ps.
	l.	l.	l.	l.	l.	l.	l.	l.	l.
1	000.235	000.242	000.246	000.25	000.606	00.001	00.002	00.003	00.004
2	000.475	000.483	000.492	000.5	001.212	00.002	00.003	00.005	00.007
3	000.712	000.725	000.737	000.75	001.818	00.003	00.005	00.008	00.011
4	000.95	000.967	000.983	001.0	002.424	00.004	00.006	00.010	00.014
5	001.187	001.208	001.229	001.25	003.03	00.005	00.008	00.013	00.018
6	001.425	001.45	001.475	001.5	003.636	00.006	00.009	00.015	00.022
7	001.662	001.692	001.721	001.75	004.242	00.007	00.011	00.018	00.025
8	001.9	001.933	001.967	002.0	004.848	00.008	00.012	00.021	00.029
9	002.137	002.175	002.212	002.25	005.454	00.009	00.014	00.024	00.033
10	002.375	002.417	002.458	002.5	006.060	00.010	00.016	00.026	00.035
20	004.75	004.833	004.917	005.0	012.121	00.021	00.031	00.052	00.073
30	007.125	007.25	007.375	007.5	018.181	00.032	00.047	00.078	00.109
40	009.5	009.667	009.833	010.0	024.242	00.042	00.062	00.104	00.146
50	011.875	012.083	012.292	012.5	030.303	00.052	00.078	00.130	00.182
60	014.25	014.5	014.75	015.0	036.364	00.062	00.094	00.156	00.219
70	016.625	016.917	017.208	017.5	042.424	00.073	00.109	00.182	00.251
80	019.0	019.333	019.667	020.0	048.485	00.083	00.125	00.208	00.292
90	021.375	021.75	022.125	022.5	054.545	00.094	00.141	00.234	00.328
100	023.75	024.167	024.583	025.0	060.606	00.104	00.156	00.260	00.365
200	047.5	048.333	049.167	050.0	121.212	00.208	00.312	00.521	00.729
300	071.25	072.5	073.75	075.0	181.818	00.312	00.469	00.781	01.094
400	095.0	096.667	098.333	100.0	242.424	00.417	00.625	01.041	01.458
500	118.75	120.833	122.917	125.0	303.03	00.521	00.781	01.301	01.823
600	142.5	145.0	147.5	150.0	363.636	00.625	00.937	01.561	02.190
700	166.25	169.167	172.083	175.0	424.242	00.729	01.093	01.822	02.552
800	190.0	193.333	196.667	200.0	484.848	00.833	01.249	02.083	02.917
900	213.75	217.5	221.25	225.0	545.455	00.937	01.406	02.344	03.281
1000	237.5	241.667	245.833	250.0	606.060	01.042	01.562	02.604	03.646
2000	475.0	483.333	491.667	500.0	1212.212	02.083	03.125	04.209	07.291

The Construction of the Table foregoing.

The first Column toward the left-hand is any Number of *Crowns, Dollars, Ducats, Pieces of Eight, Flemish-pounds, or any other Denomination of Foreign Coin*, whose Value is as expressed at the Head of each Column; the 17 Columns next, shew the Sterling Money that any Sum of Foreign Coin is equal to, at any Rate, from 48 *d.* to 60 *d.* Sterling, for each Piece of Foreign Coin. The 5th Column from the Right-hand, sheweth how many Pounds Sterling are contain'd in any Number of Flemish-pounds, from 1 to 2000, at the Rate of 33 *s.* Flemish, for 20 *s.* Sterling. The four Columns next the Right-hand, shew the Amount of any Piece of Coin at $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, or $\frac{1}{8}$ of a Penny per Piece, whose Use shall be shewed by and by.

The Calculation of the Table.

Multiply any of the Numbers at the Head of a Column by any of those in the Column next the Left-hand, and the Product is the Tabular Number answering the said two Numbers in Sterling Money, except the Column of Flemish Pounds, which is thus calculated:

As 33 Shillings Flemish,

Is in Proportion to 1 Pound Sterling;

So is 20 Shillings Flemish

To .606060 *l.* Sterling, which Number being multiplied by any of the Numbers in the Column next the Left-hand, produces the respective Number in Sterling Money, answerable to the aforesaid Number in the Left-hand Column, supposing them Flemish Pounds.

The Use of the Table in Casting up Bills of Exchange.

Admit you would know how much Sterling Money is contain'd in 1000 Dollars, each 60 $\frac{1}{2}$ *d.* Sterling.

Look for 1000 in the Column next the Left-hand, and in a right Line toward the Right-hand, under 60 *d.* is — 250.0 *l.*

Then look under $\frac{1}{2}$ *d.* and you find 1.042, which } — 2.084 *l.*
doubled (for the $\frac{1}{2}$ *d.*) is ————— }

The Sum of which is the Answer, makes Sterling — 252.084 *l.*

Note that if the Summ given of Foreign Coin is 1500, 1820, 2500, &c. you may take the Answer out at twice or thrice.

Reasons for the Rise and Fall of Exchange. 139

V. I have hinted before, that there are accidental or contingent Causes of the Rise and Fall of Exchange; and these Causes are either general or more particular.

2. The Cause in general of the Fall of Exchange is, when any thing happeneth in a Nation or Place, that interrupts and obstructeth the Course of Trade, so that it cannot be carried on in so good Order, or in so great Quantity in the Gross, as it formerly used to be, the contrary whereof maketh the Course of Exchange rise in favour of that Nation. Now these accidental Interruptions happening in one, two, &c. Places of a Nation or Countrey unknown to the rest thereof, gives Occasion for some to assert, that the Rise and Fall of Exchange is unaccountable; only, in truth, because they cannot survey and discern the circumstances of the whole Body of Trade so well as they can their own, or perhaps that of the Town in which they reside. But more particularly.

3. When the Ballance of Trade runneth against a Nation, *i.e.* when a Nation has more Occasion to pay Debts in foreign Parts, than they have to receive from thence; in this Case, the Course of Exchange will run low against such a Nation, which Ballance of Trade is only perceivable by its Effects, the greatest and most visible of which is the raising the Course of Exchange.

4. Another Cause of the Exchange running low against any Nation is, when the Coin thereof is debas'd or diminish'd either in Weight or Fineness (as I have shew'd more at large in another Occasion) this we have lately had a Specimen of, when our coin'd Silver was so prodigiously clipt, that near $\frac{1}{3}$ was diminished. And coin'd Gold at 30 *s.* that was coined but at 20 *s.* the *Dutch* (and other Nations in like manner) allow'd but 26 and 27 *s.* Flem. for 20 *s.* Sterling, whereas now, since the amending our Silver, and lowering the Value of our Gold Coins, the *Dutch* have allow'd us (and other Nations proportionably) 35 *s.* for 20 *s.* Sterling.

5. The Rise or Fall of Bullion rises or falls the Course of Exchange.

6. When a Nation is oblig'd to maintain an Army out of their own Country, this will fall the Course of Exchange against such a Nation.

7. Sometimes Embargoes, sometimes contrary Winds, sometimes too great Encouragement of importing Foreign, and discouragement of exporting Inland Goods, &c. lower the Course of Exchange, tho' not immediately, but by influencing the Ballance of Trade. These

136 *Rules for keeping the Course of Exchange.*

These Causes are sufficient to such as were ignorant thereof before, and for such as were not, they will as easily guess at the other Causes of the Rise and Fall of Exchange, as I can inform them.

VI. As the Prescription of fit and proper Remedies do naturally result from a right Apprehension of the Cause of a Distemper or Irregularity; so do the Rules I am now upon, from the Causes delivered in the last general Head, which might be a sufficient Reason for me to leave every one to draw their own Consequences; yet because some young Tyroes might be misled, I shall give them what Assistance I am able in the matter.

2. The first Rule that may be given to keep the Course of Exchange as high as the Par, is to keep our selves from being indebted to Foreigners, which some would have done, by keeping a strict Account of the Ballance of Trade; but that being impossible, having never been done, nor never like to be, I rather advise, that every particular Merchant be obliged to take Care that his Exports be equivalent to his Imports, *i. e.* that he import no more of Foreign Goods, than what the Commodities which he exported, will purchase in the Foreign Markets, which would every Merchant do (tho' this would not discover the gross Sums of the Value of the Exportations and Importations in the whole Body of Trade, which some have industriously sought-after, in order to know the whole Ballance,) yet it would keep us without a Ballance of Trade, or that it would not lie on our side, which would certainly for the most part keep the Course of Exchange up to the Par.

3. A second Rule may be, that the Government take Care that no Money be made or permitted to pass Current, that is not according to the present Standard for Weight and Fineness, for it was on this Rock, of suffering base and clipped Money to pass, that we had like to have split very lately, and which had miserable Effects on Trade, and more particularly on the Course of Exchange.

4. A third Rule may be, That Embargoes be not laid on Shipping outward, unless upon extraordinary Occasion.

5. A fourth Rule may be, That before any Commodity be prohibited or encouraged to be Exported or Imported, the most able and disinterested Merchants be consulted, who are most likely to discern the Consequences thereof, and that no Goods be prohibited, especially Exportation, without absolute Necessity.

6. That

6. That due Encouragement be given to Importation of Gold and Silver Bullion.

§. 5. Concerning Interest of Money.

Among the various Uses of Money this of lending at Interest is said to be most unnatural, because remotest from the Design of its first Institution, which was for a Pledge in Buying, &c. but notwithstanding that, it is certainly no less advantageous both to Lenders and Borrowers; nor is it accounted by any but Enthusiastical Conceited Heads, a Use less warrantable than any other that is made of Money, Lending and Borrowing Money upon Interest, being a thing practised under most, if not all the Governments in the Trading part of the World.

2. The two material Things considerable in Borrowing and Lending Money at Interest (to say nothing of Securities) is,

1st. The Rate of Interest.

2nd. The Time of Payment.

The Rate of Interest is the Sum given for the Use of 100 l. for one Year, and this is in some Places more, in other less, which is generally proportioned to the Plenty or Scarcity of Money and Trade, or Dearness and Cheapness of things: Thus in *Italy* and *Holland* the Rate is 3 l. per Cent. in *Swedenland* 6; *France* 7; *Spain*, *Scotland* and *Barbadoes* 10; *Ireland* 12, and *Turkey* 20 per Cent. from which different Rates the ingenious Sir *Josias Child* makes many curious Remarks in his Discourse concerning Trade, to which I refer the Reader that is inquisitive after the Policy of these Matters, this Book being chiefly design'd for Practice; and as for the Rate in *England* it is by Statutes made 12 Car. 2. Chap. 13. 13 Car. 2. Chap. 14. not to exceed 6 l. per Centum per Annum, which because some People are ignorant of, I shall insert the Penalty in the Act mention'd, viz.

Whereas the Abatement of Interest from Ten in the Hundred in former times, hath been found by notable Experience beneficial to the Advancement of Trade, and Improvement of Lands by good Husbandry, &c. And whereas in fresh Memory the like fall from 8 to 6 in the Hundred by a late constant Practice, hath found the like Success to the general Contentment of this Nation; as is visible by several Improvements, &c.

By it for the Reasons aforesaid Enacted by the King's most Excellent Majesty, and the Lords and Commons in Parliament assembled, That no Person or Persons whatsoever from and after the Twenty ninth of September, in the Year of our Lord One Thousand Six Hundred and Sixty, upon any Contract, shall from and after the said Twenty ninth of September take directly or indirectly for Loan of any Monies, Wares, Merchandizes, or other Commodities whatsoever, above the Value of six Pounds for the forbearance of one hundred Pounds for a Year; and so after that Rate for a greater or a lesser Sum, or for a longer or shorter Time: And that all Bonds, Contracts and Assurances whatsoever made after the Time aforesaid for Payment of any Principal or Money to be lent or covenanted to be performed upon; or for any Usury whereupon or whereby there shall be reserved or taken above the Rate of six Pounds in the Hundred as aforesaid, shall be utterly void. And that all and every Person or Persons whatsoever, which shall after the Time aforesaid, upon any Contract to be made after the said twenty ninth Day of September, take, accept, and receive by way or means of any Corrupt Bargain, Loan, Exchange, Chevisance, Shift or Interest of any Wares, Merchandize, or other Thing or Things whatsoever; or by any deceitful Way or Means, or by any Covin, Engine, or deceitful Conveyance for the forbearing or giving Day of payment for one whole Year, of and for their Money or other Thing, above the Sum of six Pounds for the forbearing of One hundred Pounds for one Year; and so after that Rate for a greater or lesser Sum, or for a longer or shorter term, shall forfeit and lose for every such Offence the treble Value of the Monies, Wares, Merchandize and other things so lent, bargained, sold, exchanged or shifted, &c.

4. The time at which the Interest of Money is payable, is usually either Yearly, $\frac{1}{2}$ Yearly or Quarterly; but when the Interest is payable Quarterly, it is more advantageous to the Lender and less to the Borrower, because the Lender, tho' he receive but 6 Pound *per Cent. per Ann.* yet if he receive 30 s. every Quarter, he has the Use of that 30 s. the 2d Quarter; of 3 l. the 3d Quarter, and 4 l. 10 s. the 4th Quarter, which the Borrower would have had the Use of, had the Interest been but payable yearly, which difference in the times payable, make a difference in the Amount or Improvement of the Principal, as will farther appear by and by.

5. Interest is either Simple or Compound.

6. Simple

6. Simple Interest is the Interest of the Principal Money first put out to Interest; as if I put 100 l. for 2 Years to receive 6 per Cent. per Ann Simple Interest, the Principal will be 100 l. and the Interest 12 l.

7. Compound Interest is so called, because the Interest payable arises from the Principal and Interest due thereupon jointly: As if I put out 100 l. for 2 Years, to receive 6 l. per Cent. per Ann. according to the utmost Improvement, the Interest, as it becomes due being not received but forborn: In this Case the 100 l. at the first Year's End will be augmented to 106 l. which 106 l. is my Principal for the 2d Year, and at the Determination thereof will be increased to 112 l. 7 s. 2 1/2 d. which is 100 l. Principal, 12 l. for the two Years Simple Interest, and 7 s. 2 1/2 d. the Interest of 6 Pounds my first Year's Interest, for the 2d Year.

8. As there is more Advantage to the Lender by receiving Compound Interest than simple, so there is more Advantage when Interest forborn is payable half yearly than yearly: Thus 100 l. at Simple Interest, at 6 l. per Cent. per Ann. will be 200 l. in 16 Years 8 Months: At Compound Interest it will be 200 l. in 11 Years 11 Months at the Rate aforesaid, or if forborn 7 Years it will be augmented to 150 l. 7 s. 3 1/2 d. if the Interest was payable yearly, but if half yearly, the 100 l. in 7 Years will be increased to 151 l. 5 s. 2 d.

Case 1.] When you would find the Simple Interest of any Sum for 1, 2, 3, 4, &c. Years.

Rule.] Make 100 l. the first Number in the Golden Rule, the Rate of Interest, or Interest of 100 l. the second Number, and the Sum given the third Number, and work as before taught in the Rule of direct Proportion; and having found the Interest for one Year, multiply it by the Number of Years, and you have the Answer.

Example.] What is the Simple Interest of 500 l. for three Years, at 6 l. per Cent.

$$100 : 6 :: 500$$

6

30.00 one Year's Interest }
3 Years _____ } Multiply

90.00 Pounds, Answer.

T 2

Example.]

A. TABLE of Simple Interest at any usual Rate, Viz. At 3, 5, 6 or 8 l. per Cent. per Annum, from 1 l. to 1000 l. for one Day, and may likewise serve for a greater Sum, Number of Days, or Rate of Interest.

	3 l. per C. 1 Day.	5 l. per C. 1 Day.	6 l. per C. 1 Day.	8 l. per C. 1 Day.
1	.0000821	.00013698	.00016438	.00021917
2	.0001642	.00027397	.00032876	.00043835
3	.0002463	.00041095	.00049315	.00065753
4	.0003284	.00054794	.00065753	.00087671
5	.0004105	.00068493	.00082191	.00109589
6	.0004926	.00082191	.00098629	.00131506
7	.0005747	.00095890	.00115068	.00153424
8	.0006568	.00109568	.00131506	.00175342
9	.0007389	.00123287	.00147944	.00197260
10	.0008219	.00136986	.00164383	.00219178
20	.0016438	.00273972	.00328766	.00438356
30	.0024657	.00410959	.00493149	.00657534
40	.0032876	.00547942	.00657532	.00876712
50	.0041095	.00684930	.00821915	.01095890
60	.0049314	.00821916	.00986298	.01315068
70	.0057533	.00958902	.01150681	.01534246
80	.0065752	.01095888	.01315064	.01753424
90	.0073971	.01232874	.01579447	.01972602
100	.0082191	.01369863	.01643835	.0219178
200	.0164382	.02739726	.03287670	.0438356
300	.0246573	.04109599	.04931505	.0657534
400	.0328764	.05479462	.06575340	.0876712
500	.0410955	.06849315	.08219175	.1095890
600	.0493146	.08219278	.09863010	.1315068
700	.0575337	.09589141	.11506845	.1534246
800	.0657528	.10959004	.13150680	.1753424
900	.0739719	.12028867	.14794515	.1972602
1000	.082191	.13698630	.16438356	.219178

Advertisement.] They that do not understand Decimals may see my Index to Interest, where is the Interest at any Rate for any time in Vulgar Numbers; and many other useful Matters, not elsewhere extant.

The Construction and Use of the foregoing Table.

The first Column toward the Left Hand, is the Sum of which you would know the Interest, the second is the Interest of any of those Sums for one Day, at 3 *l. per Cent. per Annum*; the third is the Interest of any of those Sums for one Day, at 5 *l. per Cent. per Annum*; the fourth the Interest for the same Time; at 6 *l. per Cent. per Annum*; and the fifth at 8 *l. per Cent. per Annum*, for one Day. The Use of which is thus:

Suppose I would know (as in the Example of the second Case foregoing) the Interest of 750 *l.* for 178 Days, at 8 *l. per Cent.*

Look in the Table against 700 *l.* and you will find under 8 *l. per Cent.* .1534246, which is the Interest of 700 *l.* for one Day, at 8 *l. per Cent.* and against 50 *l.* under 8 *l. per Cent.* you'll find .0109589, which is the Interest of 50 *l.* for one Day, at 8 *l. per Cent.* the Sum of which is .1643835, which multiply by the Number of Days your Sum is forborn (which in this Example is 168 Days) and the Product is the Answer; which in the Example aforesaid is 29.260 *l.* or 29 *l.* 5 *s.* 2 *d.*

Example 2.] Suppose I have bought Goods to the Value of 1000 *l.* for which I am to pay at the End of 6 Months by Contract; but a Week afterward I agree to pay the said Money presently, for which I am to have Rebate at 8 *l. per Cent.* how much Money must I pay?

In six Months wanting one Week, are 175 Days: Therefore multiply the Number in the Table, against 1000, under 8 *l. per Cent.* viz. .219178 by 175 Days, and the Product is 38.356 *l.* which I am to be abated of my 1000 *l.* and am therefore to pay but 961 *l.* 12 *s.* 10 *d.*

$$\begin{array}{r}
 .219178 \\
 \quad 175 \\
 \hline
 1095890 \\
 .1534246 \\
 219178 \\
 \hline
 38\ 356150
 \end{array}$$

Compound Interest.

143

Case 3.] When you would find the Compound Interest of any Sum,

Rule.] Make 100 *l.* the first Number in the Rule of Proportion, 100 *l.* and its Interest for a Year, the second Number, and the Sum you would know the Interest of, the third Number; then multiply and divide, and the Quotient is the Principal given, and Interest required for one Year; which make the third Number in the Rule of Proportion; continuing the first and second Number as before, &c. So that for every Year your Money is forborn, you have one Operation in the Rule of Proportion.

Example.] What is the Amount of 550 *l.* 10 *s.* for three Years Compound Interest, computed at 6 *l.* per Cent. per Annum? See the Operation.

$$\begin{array}{r} \textit{l.} \quad \textit{l.} \quad \textit{l.} \\ 100 : 106 :: 550.5 : \\ \hline \end{array}$$

$$\begin{array}{r} 33030 \\ 5505 \\ \hline \end{array}$$

$$100 : 106 :: 583.530 \quad \text{The first Year's Amount.}$$

$$\begin{array}{r} 350118 \\ 58353 \\ \hline \end{array}$$

$$100 : 106 :: 618.5418 \quad \text{The second Year's Amount.}$$

$$\begin{array}{r} 37112508 \\ 6185418 \\ \hline \end{array}$$

$$655.654308 \quad \text{The Amount for three Years; or 655} \frac{13}{100} \text{ s. 1d. which is the Answer.}$$

Case 4.] When it is required to find the present Worth of any Sum of Money, due at the End of any Number of Years yet to come, Compound-Interest discounted at 6 *l.* per Cent. per Annum.

Rule.]

Merchants Accounts; or,

Rule.] Say as 106 *l.* (the Principal and Interest of 100 *l.* for one Year) is in Proportion to the present Worth thereof; So is any Sum due a Year hence to the present Worth thereof. And so for any other Sum or Time.

Example.] What is the present Worth of 655 *l.* 13 *s.* 1 *d.* due at the End of 3 Years to come, Compound Interest discounted at 6 per Cent. per Annum?

The Decimal of 13 *s.* 1 *d.* is .654308 *l.*

Therefore say, *l.*

$$106 \text{ l.} : 100 :: 655.654308$$

$$\begin{array}{r} 106 \overline{) 65565430800} \\ \underline{196} \\ 905 \\ \underline{574} \\ 443 \\ \underline{190} \\ 848 \\ \underline{0} \end{array}$$

l.
(618.5418 = the Worth at the end of one Year, which is the 3d Number in the next working.

2^{dly.} Say, 106 : 100 :: 618.5418

$$\begin{array}{r} 106 \overline{) 618541800} \\ \underline{885} \\ 374 \\ \underline{561} \\ 318 \\ \underline{0} \end{array}$$

l.
(583.53 = the Worth at the end of two Years to come, which is the 3d Number in the next Operation.

3^{dly.} Say, 106 : 100 :: 583.53

$$\begin{array}{r} 106 \overline{) 5835300} \\ \underline{535} \\ 530 \\ \underline{0} \end{array}$$

l.
(550.5 = the present Worth, due at the end of 3 Years, or the Answer, which is 550 : 10: 00

There

There is a much briefer way of finding the Compound Interest, which is done for any Number of Years, at one Operation by Artificial Numbers, call'd *Logarithms* (as may be seen in my Index to Interest); but since that kind of Arithmetick falls not within the Subject of this Book, which tends chiefly to accomplish the young Merchant; and since Compound Interest is seldom either taken or given by great Traders, I shall therefore omit the former, and say no more of the latter.

§ 6 *Concerning Equating Time of Payment.*

When several Sums of Money are due at several Times, and the Debtor and Creditor agree to make but one Payment of the whole, it may be done without Loss to either, by this

Rule.] Multiply every Sum of Money by the Time it becometh due, and divide the Sum of the Products by the total Debt, and the Quotient is the true Time, at which the Money ought all to be paid.

Example.] Admit I have 1200 *l.* owing me, to be paid at 4 several Payments, *viz.* 500 *l.* at two Months end, 300 *l.* at 6 Months, 200 *l.* at 10 Months, and 200 *l.* at 12 Months; the Question is at what Time the whole may be paid at one Payment, without Wrong on either Side?

<i>l.</i>	<i>Mon.</i>	<i>Products.</i>	
500	*	2 = 1000	} Dividend. <i>Month.</i> 7200 (6 = Quotient, or Answer.
300	*	6 = 1800	
200	*	10 = 2000	
200	*	12 = 2400	
1200	} Divisor		

By the Work you see the whole Debt ought to be paid at the end of 6 Months, which is the true equated Time.

Note, that (*) signifieth [multiplied by] and (=) equal to.]

§ 7. Concerning Gain and Loss in the Practice of Merchandize.

Case 1.] When Goods are bought at any Rate, and you desire to know how to retail the same, so as to gain a certain Sum by the Sale.

Rule.] As the whole Quantity of the Goods bought, Is in Proportion to the Total of the Sum given for the Goods, and the Sum proposed to be gain'd;

So is any Part of the Commodity,

To a fourth Number, for which if you sell the said Part, you will gain the Sum desired by the Sale of the Whole.

Example.] Admit a Druggist buyeth 158 Ounces of black Ambergreece for 280 l. I demand how he may sell the same (by the Ounce Troy) to gain 50 l. by the Bargain? Say,

$$\begin{array}{r}
 \begin{array}{ccccccc}
 \text{•} & \text{l.} & \text{•} & \text{l.} & \text{l.} & \text{s.} & \text{d.} \\
 158 : & 280 :: & 1 : & (1.772 \text{ Answer, or } 1 : 15 : 5\frac{1}{4} \text{ per Ounce.} \\
 & 280.000 & & & & & \\
 & \dots & & & & & \\
 & \hline & & & & & \\
 & 1220 & & & & & \\
 & \hline & & & & & \\
 & 1140 & & & & & \\
 & \hline & & & & & \\
 & 349 & & & & & \\
 & \hline & & & & & \\
 & 24 & & & & &
 \end{array}
 \end{array}$$

Case 2.] When you would gain a certain Sum *per Cent.* by the Sale of any Commodity, to know how to sell the same.

Rule.] Consider what the whole Value of your Goods will gain at your proposed Rate *per Cent. per Annum*; then work as in the last Case.

Example.] A Furrier buyeth 2100 lb of New-England Bever for 700 l. 14 s. how may he sell the same *per Pound*, to gain at the Rate of 20 l. *per Cent*

The

Loss and Gain.

The Operation is thus performed!

	l.	l.	l.	
	100	: 20	::	700.7
				20
	<hr/>			
	140.140	The proposed Gain by 700 : 14		
	700.7	Add		
lb Beaver If 2100 2100 :)	<hr/>	840.84	lb :: 1	s. d. q.
	<hr/>	840.84		(4004 lb or 8 : 0 : 4 per lb
	<hr/>	84		but 8 s. will answer your de-
	<hr/>	84		fire, wanting only 6 s. 9 d. at
				the whole.
		o		

Case 3.] When Goods are bought at a certain Price, and afterwards sustain Damage, and must therefore be sold at an under Rate, to know how to sell the same, to lose a certain Sum.

Rule.] First, find the Value of the Goods at a Rate you gave for them, from which deduct what you are willing to lose, and work the Remainder in Proportion, as in the two last Cases.

Example.] An Oylman buyeth of a Merchant 2100 lb of *Westphalia* Ham, for which he gives 9 d. per Pound; but having sustain'd Damage, he is willing to lose 8 l. 15 s. by the Sale; at what Price must he sell the same to lose just that Sum?

The Value of the Hams by Practice is 78 l. 15 s.	l. s.	
	78 15	The Loss 8 : 15 deduct.
	<hr/>	<hr/>
1/3 of 2100 at 9 d.	2100 : 70 :: 1	
} 1s = 52 l. 10 s.		2100 } 70.1000 (.0333) Answer,
} 2/3 1s = 26 l. 5 s.		<hr/>
<hr/>		70
Facit 78 l. 15 s.		<hr/>

7
By the Work I find he must sell for 8 d. per lb.
U 2 The

The last Question is more briefly resolved thus:

If 2100 lb lose 8.75 l. what will 1 lb lose?

2100) 8.750 (0.04 l. or 1 d. per Pound loss.

So he must sell it for 8 d. per lb as was taught before.

Case 4.] When Goods are bought at one Price, and sold for a greater, to be paid at Time, to know what you gain by 100 l. in a Year at that Rate.

Rule. Say by the Double Rule of Direct Proportion foregoing.

As the Price that your Goods (or any part) cost you, is to the Gain by such Goods, or part in the Time you trust the Buyer;

So is 100 l. in 12 Months to the Sum gained thereby for Answer.

Example.] A Merchant bought Logwood at 20 s. 6 d. per Hundred, ready Money, and sold the same to a Dyer for 25 s. per Hundred, to be paid at the end of 6 Months; the Question is what he gained at that Rate by 100 l. in a Year. See the Work as by the Rule above.

1 Hundred cost the Merchant 20.5
He sold the same for 25.

His Gain by 1 Hundred = 4.5 Then say,

s. Mo. s. l. Mo.
If 20.5 : 6 : 4.5 : 100 : 12

6

123.0

4.5

450.0

12

123) 5400.000 (43.902

or 43 : 18 : 0.5 per Cent. per Annum

480

1110

300

54

§ 8. Concerning Fellowship, or Trading in Company.

Case 1.] When two or more Merchants make a common Stock, and by Trade gain or lose a certain Sum; to know what each gaineth or loseth in Proportion to his Share of the common Stock.

Rule.] Divide the whole Loss or Gain by the whole Stock, and multiply the Quotient by each Man's Share of the Stock, and the several Products are the respective Gain or Loss of each particular Merchant.

Example.] Three Merchants make a common Stock of 16000*l.* of which

7000 *l.* was put in by the first Merchant,
5000 *l.* by the second; and
4000 *l.* by the third.

and by one Voyage they gain 24000 *l.* what must each have in proportion to his Share?

7000 <i>l.</i>	5000 <i>l.</i>	4000 <i>l.</i>	}	Total
<hr style="width: 100%;"/>				
<i>Gain.</i>				

The whole Stock = 16000) 24000 (1.5 = the multiplier

$$\begin{array}{r} 80 \\ \hline 0 \end{array}$$

7000	}	Multiplied by	1.5	produceth	{	10500 = the Profit of the 1st.
5000						7500 = of the 2d.
4000						6000 = of the 3d.

Sum = 24000 for proof

Case 2.] When several Merchants make a common Stock for a certain Time, and at the end thereof make a Dividend, to find each Man's Share of the Gain or Loss according to his Stock and Time.

Rule.

CHAP. X.

Treatise of Book-keeping by Debtor and Creditor.

HAVING in the foregoing Chapters given the young Merchant the Grounds and Reasons of Arithmetick, and Rules for casting up any thing that may occur in his daily Business; I come in this Chapter to shew him how to place the same to Accompt; and that I may do it with all the Plainness I can, and in a few Words, I shall proceed to shew,

§ 1. *The Explanation of Book-keeping, with the Books requisite to be kept, and their Use.*

The Method of keeping Books by way of Debtor and Creditor, or (as some call it) after the *Italian* manner, is so regular and precise, that at any Time the Merchant can be resolv'd what he gaineth or loseth by every particular Person he dealeth with, or Merchandize he dealeth in, and consequently what he is worth to a Farthing. And for your Information, how these Books are kept, take this

General Rule.

Any thing whatsoever is received either by the Merchant, or any way for his Accompt by his Servants, whether the same be Money or Wares: I say the thing so received, for, or upon his Accompt, is in the Journal and Ledger (which shall be spoken to by and by) made Debtor to the Person receiv'd from, or thing for which it is receiv'd.

Also every Thing whatsoever is deliver'd from the Merchant upon any Accompt, whether Money or Wares, the thing so delivered by the Merchant, or any way for his Use or Accompt, is in the Journal and Ledger made Creditor, by the Person to whom, or thing for which the same is deliver'd. My meaning in this Rule shall be fully made appear in all the usual Cases of a Merchant's Dealing, after I have shewed the Books necessary for keeping Accompts after this Method, which are as followeth.

1. The

152 Concerning the Waste-book, Journal and Ledger.

1. The **Waste-Book** is that wherein every thing is entered, whether bought, sold, or bartered; as also all Goods shipp'd, Advice receiv'd of their Sale; Money lent or receiv'd at Interest, &c. (but not Money receiv'd or paid for Goods that were sold or bought at Time, or for petty Expences, &c. which I enter only in the Cash-book, and post it thence into the Ledger, which is sufficient) together with the Time when, by the Day of the Month inferred in the middle of the Page, with the Year of our Lord; and is of no farther Use, but only to remind the Book-keeper, that such and such Business is to be posted into the Journal, the Cash being never summed up in this Book, it being several Mens Accompts of Receipts and Payments placed together promiscuously.

2. The **Journal** is a Book into which every thing is posted out of the Waste-Book, which is here to be made Debtor, and ought to be expressed in a better Stile or Phrase of speaking, and fairly written more Merchant-like, it being, as it were, a Preparatory to the Ledger, whereby is shewed what Accompts are to be entered Debtor therein, and to which Book Recourse can only properly be had for the Particular of any Accompt ill wrote or worded in the Waste-book, or enter'd but briefly in the Ledger, as all Accompts usually are. In this Book the Day of the Month is also placed in the middle of the Page, which is never sum'd up, unless it contains only one Man's Accompts, for the Reason aforesaid.

3. The **Ledger** is the chief Book of Accompts, and that in which all Accompts meet, and are placed Debtor on the Left-hand Page, and Creditor on the Right; so that the Folio's on the Right and Left-hand in this Book are number'd alike; because one and the same Accompt is placed on both sides. In this Book the Day of the Month is placed in a narrow Column toward the Left-hand of the Page, and the Name of the Month to the Left-hand the Day. At the Head of each Folio in this Book, is written the Name of the City or Place where the Books are kept, with the Year; all which you will see in the Example of these three Books, after the several Cases. The Denomination of most of your Accompts to be entered in this Book; are thus ranked and explain'd.

First, place your Account of Stock at the beginning of your Ledger, viz. Make Stock Debtor to what you owe when you begin to keep your Books, let the Debt be upon what Accompt soever, in these Words, on the Left-hand Folio, as it lieth before you.

Stock

Stock Debtor.

To sundry Accompts, as *per* Inventory, so much as your Debts are, and first of all, having taken an Inventory of all you are worth in Cash, Wares, or Debts, (as you see in the Inventory following) write on the Right-hand Folio the Sum of what you are worth, as appeareth by the Particulars in the Inventory, making Stock Creditor in these Words,

Per contra Creditor,

By sundry Accompts, as *per* Inventory, mentioning the Value of all the Cash, Wares, and Debts you have.

The next thing (on the same Folio) is the Accompt of Cash, where note, that before you enter any thing Debtor or Creditor in your Ledger, you are to look whether you have any thing of the same Denomination in your Inventory, which if you have, you must the first thing in the Accompt, make it Debtor to Stock for so much as is in the Inventory of that Accompt, as suppose you have in ready Cash at the time of taking your Inventory 2000*l.* you must make, first,

Cash, Debtor,

To Stock _____ *l.* 2000 : 00 : 00
And afterwards make the same Accompt Debtor to sundry Accompts, as *per* Cash-book. And the said Persons of whom you receiv'd, or Wares for which you receive Money, must be made in their own Accompt Creditor By Cash, according to the general Rule foregoing, as shall be shewn in the Cases following.

Next to the Accompt of Cash in your Ledger, you may put what Accompt occurs in Practice: as the Accompt of any Person, of Wares, Voyages, &c. as,

When you Ship off Goods to your Factor, to be sold for your Accompt, you are in this Book to keep an Accompt for the Voyage in a place by it self, as you do the rest, making *Voyage to such a place, (mentioning the Port or Place your Factor resides at), assigned to such a Person (mentioning your Factor's Name)* Debtor to the Goods Shipped. To Custom, Insurance, and all other Charges on the same, and the contrary Accompts Creditor by Voyage.

When you have Advice that the Goods Ship'd are Sold, then in some one place make *Factor at such a Place, my Account current Debtor to Voyage*; and the Voyage Creditor By the Account current, &c.

In this Book is also kept the Account of Profit and Loss, by it self thus:

Profit and Loss Debtor,

To Cash for what Money you pay and have nothing for it; as to Rebate of Money paid you before due; To Abatement by Composition, when a Person is insolvent; To Household Expences, Servants Wages, &c. And,

Per Contra Creditor,

By Cash for all you receive, and deliver nothing for the same; as by Money received with an Apprentice; by Rebate for paying a Sum before due; for Legacy left you by a Friend, and by the Sum you gain by every particular Commodity you deal in; By Ships in Company; By Voyages, &c.

4. The *Cash-book* is that wherein you enter all the Money you receive upon any Account, on the Left-hand Folio, making Cash Debtor to the thing you receive it for, if it is receiv'd for Goods then Sold, but if not, To the Person you receive it from, as in the Example of a Cash-Book, &c. and on the Right-hand Folio enter all the Cash you pay, Creditor By the Person you pay it to (mentioning whether it is in full or in Part) or thing you pay it for, if paid for Goods then bought, and place the Day when you receive or pay it as in the Ledger, and once in a Month, or oftner, sum up your Account of Cash receiv'd and paid, carrying the Sum to the Account of Cash in the Ledger, which Account, without this Book would swell too big, provided you should enter the Particulars there.

5. It is necessary you should keep a Book to enter all the Cash which you expend in House-keeping, and once in a Month transfer the same into the Creditor-side of the Cash-Book, and then into the Debtor-side of the Ledger, thus:

Household Expences, Debtor,

To Cash, so much as you bring from your Book of Household Expences; and Cash is made Creditor, By Household Expences in your Cash-Book, For the Monthly Sum spent in House-keeping, and brought from the Book of Household Expences. In this Book 'tis likewise proper to enter the Charge of Apparel, Rent of your Dwelling-House, Pocket-Expences, Servants-Wages, &c. as in the following Book of Household Expences.

6. **A Book of Charges on Merchandize**, wherein you must enter the Charge of Custom, Freight, Ware-house, Room, Postage of Letters, Porterage, Cartage, Wharfage, Books of Accounts, &c. and once in a Month make a Sum, and transfer it into the Creditor-side of your Cash-Book, making a Referr to the Folio of the Book of Charges of Merchandize; and also into the Debtor-side of the Account of Charges of Merchandize in your Ledger.

7. **A Book of Factories or Invoices**, Which is an Account of Goods shipt or sent by you to your Factor, or receiv'd from him, &c. In this Book enter the Goods sent or Shipt to be Sold for your Account, with the Value and Time when sent, on the Left-hand Folio; and as you receive Advice of their Sale, enter the same on the Right-hand Folio; so may you readily see how the Account stands in that Particular.

8. Besides these Books, the Merchant ought to have a Book, wherein to enter a Copy of all Letters he sendeth or receiveth upon Account of Trade: Also,

9. A Pocket-Book, to take the Minutes of what Business he does abroad, for the Ease of Memory, and to avoid Error.

10. A Bill-Book, or small Book, wherein to enter all Bills of Exchange the Merchant accepteth, with the Sum and Time when payable, and to whom; or if foreign Bills, a Copy of the Bill; and as you pay the same, write [*Paid*] in the Margin against the Bill paid.

11. Lastly, A Book of Receipts, wherein to take all Receipts for Money you pay; expressing first the Day of the Month, then the Sum receiv'd, and for what, or whether in full or in part, and for what Use, which must be Sign'd by the Person receiving.

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Thus have I given you an Account of all the Books necessary for a Merchant to keep, especially if he is a great Dealer; also the Nature of the Account to be inserted in each Book, and the Use thereof. I shall next proceed to give such particular Directions as will enable the Book-keeper to find proper Debtors and Creditors, for most, if not all the Cases he will meet with in the Practice of Merchandize.

§. 2. *Sheweth how to enter in your Ledger proper Accounts in Domestick Trade.*

Definition. **P**ROPER Accounts in Domestick Business is, when the same is wholly managed by the Merchant, (or his Domestick Servants) in Trade for himself, &c. not by Commission; as in the Cases following.

- Case 1.* When Money is receiv'd for a Debt.
Rule. [Cash Debtor] to him for whose Account it was paid.
 The Paying-man's Account, Creditor, By Cash.
- Case 2.* When present Money is receiv'd for Wares.
Rule. [Cash Debtor] To the Wares Sold, the Sum receiv'd.
 Goods sold Creditor By Cash for the same Sum.
- Case 3.* When Money is pain for Wares, presently, as soon as bought.
Rule. [Wares bought, Debtor] To Cash for what paid.
 Cash Creditor, By Wares bought in the same Sum.
- Case 4.* When I pay Money that was due formerly.
Rule. [The Receiver's Account] Debtor to Cash for what paid.
 Cash Account, Creditor, By the Person receiving.
- Case 5.* When Money is taken at Interest.
Rule. [Cash Debtor] to the Lending-man for the Principal I receive.
 [Profit and Loss] Debtor to the Lending-man for the Interest coming due to him.
 The Lending-man Creditor, By sundry Accounts, referring to the Folio's of Cash, and Profit and Loss.
- Case 6.* When Money is Let at Interest.
Rule. [The Borrowing man] Debtor to sundry Accounts, referring to the Folio's of Cash, and Profit and Loss.
 Cash Creditor By the Borrowing-man for the Principal lent.
 Profit and Loss Creditor by the Borrowing-man for the Interest.
- Case*

Accounts proper in Domestick Trade.

- Case 7.* When Interest-money is paid by me, and
pal continued.
Rule. [Profit and Loss] Debtor to Cash for the Sum.
Cash Creditor By Profit and Loss for the same.
- Case 8.* When Money is received by me for Interest
Principal continued.
Rule. [Cash Debtor] To Profit and Loss for the Interest.
Profit and Loss, Creditor, by the Paying-man for the same.
- Case 9.* When I receive Money by Assignment.
Rule. [Cash Debtor] To the Assignor for the Sum receiv'd.
The Assignor Creditor By Cash for the same Sum.
- Case 10.* When I satisfy a Debt by Assignment of another due
to me.
Rule. [The Receiver Debtor] To him on whom the Assign-
ment is charged.
He on whom the Assignment is charged Creditor By
the Acceptor.
- Case 11.* When I pay Money to any, by my Creditor's Assignment.
Rule. [The Assignor] Debtor to Cash for the Sum paid
(mentioning to whom).
Cash Creditor By the Assignor for the same Sum, men-
tioning to whom paid, and by whose Assignment.
- Case 12.* When I received part of a Debt, and (by Composi-
tion) give a Discharge in full.
Rule. [Cash Debtor] To the Payer for the Sum receiv'd.
Profit and Loss Debtor to him for the Sum I abate by
Composition.
The Paying-man Creditor By sundry Accounts, refer-
ring to the Folio's of Cash and Profit and Loss.
- Case 13.* When Wares are bought upon Time.
Rule. The [Wares bought Debtor] To the Seller for the Va-
lue of them.
The Seller Creditor By the Wares bought for the like Sum.
- Case 14.* When Wares are sold upon Time.
Rule. The [Buyer Debtor] To the Wares sold for their Value.
The Wares Creditor By the Buying-man for the same Sum.
- Case 15.* When Wares bought are to be paid for at several Pay-
ments.
Rule. The [Wares Debtor] To the Seller for their Value, (men-
tioning the several Days of Payment in the Journal.)
The Seller Creditor By the Wares for the like Sum.

Case 16.

- Case 16.** When Wares are bought part for ready Money, and part at time.
- Rule.** The [Wares bought Debtor] To sundry Accounts, (referring to the Account of Cash, and the Seller's Account by their Folio's.
The Selling-man Creditor By Wares bought so much as is left unpaid; and Cash Creditor By Wares for so much paid Ready-money.
- Case 17.** When sundry Parcels of Wares are bought for Ready-Money.
- Rule.** The several and [respective Wares] must be made Debtor to Cash for the Value it stands me in; and Cash Creditor By sundry Accounts for the total Value, referring to the several Folio's where the several Wares stand Book'd in the Ledger.
- Case 18.** When several Parcels of Wares are sold for Ready-Money.
- Rule.** [Cash Debtor] To sundry Accounts (referring to the Folio's Where the several Wares Sold are entred in the Ledger) for their whole Value.
The respective Wares Creditor By Cash.
- Case 19.** When Wares are sold part for Ready-money and part at Time.
- Rule.** The [Buyer Debtor] To Wares sold, for the Sum unpaid.
[Cash Debtor] To the Wares sold for the Sum receiv'd in part.
Wares Creditor By sundry Accounts (referring to the Accounts of the Buyer and Cash) for the whole Sum for which the Wares are sold.
- Case 20.** When Wares are bought at Time, and Book'd, and afterward Ready-money is paid upon Rebate.
- Rule.** The [Seller Debtor] To Cash for the Sum paid him (deducting the Rebate.)
Cash Creditor by the Seller for the same Sum.
The [Seller Debtor] To Profit and Loss for the Rebate.
Profit and Loss Creditor by the Seller for the same Sum.
- Case 21.** When Wares are sold at Time, and Book'd, but Money receiv'd presently after, for the same, allowing Rebate.
- Rule.** [Cash Debtor] To the Buyer for the Sum receiv'd upon Rebate.

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The Buyer Creditor By Cash for the same Sum.
[Profit and Loss] Debtor to the Buyer for the Sum re-
bated.

The Buyer Creditor By Profit and Loss for the same Sum.

Case 22. When Wares are bought, and part paid Ready-money,
part at Time, and the rest by Assignment.

Rule. [Wares Debtor] To sundry Accounts, the whole Va-
lue referring to the Folio's of the Seller's Account, Cash
and his whole Bill is assign'd.

The Seller Cr. by the Wares for so much as is yet unpaid.
Cash Cr. by the Wares for so much as is paid in Cash.

[Him whose Bill you have assign'd] Cr. by the Wares,
so much as the Sum assigned is.

Case 23. When Wares are sold for part Ready-money, part by
Assignment, and the rest at Time.

Rule. [Cash Dr.] To Wares, for the Sum receiv'd in part of
the Buyer.

[The Person on whom the Assignment is made] Dr.
To Wares, so much as is assign'd.

[The Buyer Dr.] To Wares for the Sum he left unpaid.
Wares Cr. By sundry Accounts referring to the Folio's of
Cash, the Person to pay the Money assign'd, and the Buyer.

Case 24. When in Lieu of a Debt you receive Goods whose Va-
lue is more than your Debt, which Surplus is returned
in Cash immediately.

Rule. Make [Wares bought] Dr. To sundry Accounts, viz.
To the Seller for so much as his Debt was, refering to
the Folio of the Seller's Account, and to Cash for the
Surplus. The Seller's Account Cr. By Wares, for the
Sum paid him by Agreement.

Cash Cr. By Wares for the Surplus paid.

Case 25. When in Payment of a Debt you sell Goods to your
Cr. whose Value exceeding his Debt, he returneth you
the Overplus.

Rule. The [Buyer Dr.] To Wares for so much as his Debt was.
[Cash Dr.] To Wares for the Overplus returned.

Wares Cr. By sundry Accounts referring to the Folio's
of Cash, and the Buyers Account.

Case 26. When Wares are bought in Barter for other Wares.

Rule. The [Wares bought Dr.] To the Wares sold for the
Value of the Wares sold.

Wares

Accounts proper in Foreign Trade.

Wares fold Cr. By Wares bought for the Value of those bought.

Case 27. When Wares are bought, part for Wares, and part for Ready-money.

Rule. [Wares bought] To sundry Accounts, referring to the Folio's of Wares fold, and Cash.

Wares fold Cr. By the Wares bought for the Value of those fold.

Case 28. Cash Cr. By Wares bought for the Sum paid in Money. When Wares are fold for part Wares and part Ready-money.

Rule. Make [Wares bought] Dr. To Wares fold for what they cost.

Cash Dr. to Wares fold for the Sum receiv'd.

Wares fold Cr. By sundry Accounts, referring to the Folio's of the Wares bought, and Cash.

Case 29. When you pay Money for part of a Ship.

Rule. [Ship] (naming her) Dr. To Cash for the Sum paid, naming the Master, and what part you have bought.

Cash Cr. By the Ship, the Sum paid, mentioning to whom.

§ 3. *Accounts proper in Foreign Trade.*

Definit. **P**roper Accounts in Foreign Trade, is, when the Merchant sendeth Goods beyond the Sea, to some Correspondent, to be fold for his Account.

Case 1. When you Ship off Wares.

Rule. Make [Voyage to such a place] (mentioning the place whither you send them) consign'd to your Factor or Correspondent (mentioning his Name) Dr. To the Wares shipp'd for their Value, naming the Ship and Master's Name.

Wares Cr. By Voyage To, &c.

Case 2. When you would enter Charges on Goods shipp'd off.

Rule. Make, [Voyage to the place whither your Ship is bound Dr.] To Charges of Merchandize for the Sum paid on ——— (naming the Commodity.)

Charges of Merchandize Cr. By the Voyage for the same Sum.

Case 3. When Money is receiv'd upon Insurance.

Rule.

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Rule. Make [Cash Dr.] To Insurance-Account, Expressing what Sum you Insure, to whom, and on what Account. Insurance Account Cr. By Cash, &c.

Case 4. If the Goods you Insure are lost.

Rule. Make [Insurance-Account] Dr. to the Person to whom you Insured the Sum lost.

The Person to whom you Insure Cr. By Insurance-Acc^t.

Case 5. When you pay Money for Insurance.

Rule. Make [Insurance Account Dr.] To Cash for the Sum paid, (mentioning the Sum Insured to you, by whom, And on what Account) and Cash Cr. By Insurance Account, &c.

Case 6. If the Goods that are Insured to you are lost.

Rule. Make [the Person that Insured Dr.] To Insurance-Account the Sum Insured, and Insurance-Account Cr. By the Person that Insured to you.

Case 7. When you even the Account of Insurance.

Rule. If the Sum on the Cr. side exceed that of the Dr. Make [Insurance-Account Dr.] To Profit and Loss for that Excess. But if the Dr. side exceed the Cr. Make [Profit and Loss Dr.] to Insurance-Account for that Excess, and in both Cases *per Contra Creditum*——

Case 8. When you receive Advice from your Factor, that Goods formerly consign'd to him are sold——

Rule. [Factor at-- (mentioning the place where he liveth at) my Account current Dr.] To Voyage to such a place, for the known Sale in Sterling Money, being the Neat proceed of Wares, as by his Account, sold for so much foreign Coin (mentioning the Exchange) Then make Voyage to such place, consign'd to such Person (mentioning your Factor's Name). Cr. By my Factor at such Place my Account current for so much Sterling Money as you know by his Account, the foreign Coin of the Neat proceed amounts to.

Note, That the Neat proceed is when the Charges of Custom, bringing the Goods from on Board into the Ware-house, Provision, &c. is deducted from the Value the Goods are sold for by a Factor.

Case 9. When Wares are bought upon time, and ship'd off before Entry in your Books.

Y. Rule.

Rule. Make [Voyage to such a place consign'd to such a Person, Dr.] To the Selling-man, naming the Quantity, Price, and other Conditions of buying and shipping off. The Sellers Cr. By Voyage, &c.

Case 10. When Abatement is made by my Factor for Defect in Goods he formerly sold.

Rule. Make [Profit and Loss Dr.] To Factor at my Account current (mentioning for what, and the Sum.) Then make Factor at such a place my Account current Cr. By Profit and Loss for such Sum, &c.

Case 11. When Wares are bought for ready Money, and immediately shipp'd off before Entry.

Rule. Make [Voyage To ——— Dr.] To Cash for the Value of the Goods shipp'd, mentioning the Names of the Wares, Quantity and Charges, till on Board, &c. Then Cash Cr. By Voyage, &c.

Case 12. When you receive the unhappy News of your Goods being cast away.

Rule. Make [Profit and Loss Dr.] To Voyage to such a place, consign'd to such a Person, &c. Then make Voyage Cr. By Profit and Loss for the same Sum, &c.

Case 13. When I order my Factor beyond the Sea, to ship off Goods to another Factor in another Place.

Rule. [Voyage to such a place consign'd to my receiving Factor] Dr. To my sending Factor, (mentioning their Names) my Account current so much for such a Commodity.

Then make my sending Factor (mentioning his Name) at such a place my Account current Cr. By Voyage to such a Place consign'd to my receiving Factor (naming his Name and Place) for the same Sum.

Case 14. When I receive the Content of a Bill here, and thereupon draw the same on my Factor, to pay to the Order of him that paid me.

Rule. Make [Cash Dr.] to my Factor at such a place my Account current for so much Sterling received of such a Person for my Bill drawn on Ditto Factor payable by him to such a Person, at such a Time, so much Foreign Coin, which at so much Exchange, makes Sterling so much. Then make Factor at such a place, my Account current Cr. By Cash, &c. *Case*

Case 15. When I receive Wares in Return from my Factor or Correspondent.

Rule. Make [Wares received Dr.] To Factor at such a place, (who sent the Wares) my Accompt Currant so much as the Wares, Cost and Charges, mentioning what they are, &c. Then Factor at such a place, my Accompt Currant, Cr. By Wares received for their Value and Charges, &c.

Case 16. When I deliver a Bill here drawn upon my Factor beyond Sea, and receive not the Content till some time after.

Rule. The [Person to whom I deliver my Bill] Dr. To Factor at such a place, my Accompt Currant in so much Sterling for my Bill of so much Foreign Coin drawn upon such Factor, payable at such a Time, to such a Person, or Order, the Exchange at so much Sterling, for so much Foreign Coin, makes ———
Factor at such a place my Accompt Currant Cr. By the Person to whom I deliver my Bill.

Case 17. When I receive Money presently, which is the Content of a Bill drawn on some person here by my Factor.

Rule. [Cash Dr.] To Factor at — (my Accompt Currant) for so much received of such a Person by Bill of Exchange payable at Sight, for the Value paid there, (i.e. beyond Sea by my Factor) to such a Person.
Then Factor at — my Accompt Currant Cr. by Cash, &c.

Case 18. When I receive Advice that my Factor at one place has drawn a Bill on my Factor at another place.

Rule. Make [the drawing Factor my Accompt Currant] Dr. To the paying Factor, my Accompt Currant for so much Foreign Coin drawn by — payable at such a time to such a person, so much Foreign Coin, which at such a Rate makes Sterling ———
Then make the accepting Factor my Accompt Currant Cr. by the drawing Factor, my Accompt Currant, mentioning both their Names, Sum, &c.

§. 4. *Factorage Accompts in Domestick Trade.*

Definit. THESE Accompts are when a Trade is managed by the Factor or his Servants for the Employe, whom the Factor serveth in Commission,

164 **Factorage Accounts in Domestic Trade.**

- Case 1.** When a Factor receives Wares from his Employer.
Rule. Make [the Account of Goods for your Employer] Dr. to Cash for so much paid Custom, Freight, &c. at the Receipt.
Then make Cash Cr. By Account of Goods, &c. so much as paid.
- Case 2.** When Wares received in Commission by a Factor, are sold for ready Money.
Rule. [Cash Dr.] To Account of Goods for the Employer, the Sum received.
Then make Account of Goods for the Employer Cr. By Cash the same Sum.
- Case 3.** When Commission Wares are sold by the Factor in Barter.
Rule. [Goods bought in Barter] Dr. To the Employer his Account of Wares.
[Account of Wares, &c.] Cr. By Wares received the same Sum.
- Case 4.** When Wares in Commission are sold part for ready Money, and part at Time.
Rule. The [Buyer Dr.] To Account of Goods for Account of the Employer, the Sum left unpaid, Cash Dr. To Account of Goods, &c. for the Sum received.
[Account of Goods for the Employer] Cr. By sundry Accounts for the total Value of the Goods sold, referring to the Folio's of the Accounts of the Buyer and Cash.
- Case 5.** When Wares are sent to an Employer in return with Charges in Shipping off.
Rule. Make [Account of Wares for Account of the Owner (or your Employer naming his Name) his Account current] Dr. To the Goods shipp'd, naming the Value and Goods, with the Ships and Masters Names, &c.
Also the same Account Dr. To Cash paid for Custom and other Charges.
Then make Wares shipp'd Cr. By the Employer, his Account current for the Value.
And Cash Cr. by the same Account current, for the Charges of shipping off.
- Note.** That if these Goods shipp'd were bought by Order, and on the Account of the Employer with ready Money, and not entred before in your Ledger. **Make**

Make [your Employer (naming his Name) his Account current Dr. To Cash for the Value of the Goods and Charges of shipping off.

And Cash Creditor *per contra*.

Case 6. When a Bill of Exchange is drawn on a Factor by his Employer, payable at time.

Rule. Make [Employer at such a place (as before) his Account current] Dr. To whom the Bill is payable for the Content thereof.

Then make [him Cr. To whom the Bill is payable] (naming his Name) by your Employer his Account current for the same Sum.

Note. That if this Bill had been paid to Order of the Employer by the Factor presently, the Employer's Account current must be made Dr. to Cash for the Sum paid (naming to whom) And Cash Cr. by the contrary for *ditto* Sum.

And the Entry is the same with this last, when the Factor remits ready Money to his Employer.

§. 5. *Factorage Accounts in Foreign Trade.*

Definit. THESE Accounts are when a Factor cannot carry on the Business of those whom he serves in Commission without Assistance of Foreign Correspondence, for whose returns he is accountable to his Employer.

Case 1. When Goods sent to Sea are insured by me.

Rule. Make [Voyage to such a place, for such a one's Account (the Employer consigned to such a Factor Dr.) To Cash (if you paid the Insurance-money presently) and Cash Cr. By Voyage, &c.

But if the Insurance-money was not to be paid presently: Then [Voyage To, &c.] Dr. To the Insurer.

And the Insurer Cr. by Voyage.

Case 2. When Goods are shipp'd by a Factor by order of his Employer to his Factor in another Country.

Rule. Make [Voyage to such a place for Account of your Employer consigned to your Factor (naming his Name) Dr. To [my Employer his Account of Wares] for Charges at the Receipt of the Goods.

And to Cash for Charges of Shipping.

Then

Factorage Accounts in Foreign Trade.

Then make *per Contra Cr.* the Account of Wares, and Cash.

Case 3. When you receive Advice that the Wares are sold which were formerly sent to your Factor.

Rule. Make [Factor at such a place for Account of my Employer] Dr. To Voyage to such a place for *ditto* Account for the Neat proceed as by Advice.

Then make [Voyage to the same place for Account of my Employer] Cr. by Factor at — for Account of my Employer.

Case 4. When you are to enter your Provision for Wares sold on a Foreign Account.

Rule. Make [Voyage to such a place (where the Factor resideth) for Account of my Employer] Dr. to Profit and Loss, for so much as your Provision (or Money for your Employment amounteth to as by your Agreement.

Then make [Profit and Loss Cr. By Voyage (to — for Account of my Employer for the same Sum.

Case 5. When you receive Advice that your Factor hath made Abatement for Defects in Goods that he formerly sold.

Rule. Make [Voyage to such a place for Account of my Employer] Dr. To Factor at such a place for Account of your Employer, so much as abated.

Then make [Factor (at such a place) for Account of my Employer] (at such a place Cr.) By Voyage to the place your Factor liveth at) for Account of my Employer for the same Sum.

Note, That when you close the Account of Wares sold by your Factor with his Returns, &c. for Account of your Employer, you must make Voyage to your Factor, for Account of your Employer, Dr. [To your Employer's Account current] for the Ballance thereof. and contrary Cr. By Voyage to such a place for Account of your Employer, for the same Sum.

§. 6. *Company Accounts.*

Definit. **C**ompany Accounts, is when a Stock is employed in common between several Merchants in the Way of Trade, and each Partner is to have a Share of the Gain, or bear a Share of the Loss, in proportion to his Share in the Stock; as is taught in the Rules of Fellowship in the last Chapter.

Case

Case 1. When Goods are bought and paid for by my self, for Company Account.

Rule. Make [Wares in the Company between the Partner and me (naming our several Shares of the Stock) Debtor] To Cash for the Value of the Goods, &c.

Cash Cr. By Wares in Company between Partner and Me for the same Sum.

Then make [my Partner (naming his Name) his Account current] Dr. to *ditto* Partner's Account in Company for his Share of the Stock.

And his Account in Company Cr. By his Account, and current for the same Sum.

Note, That if the Goods were bought upon Trust, the Entry is the same; if instead of [Cash] you make the Goods Dr. To the [Seller] and him Cr. by the same.

Case 2. When I receive my Partner's Share of Cash for the Goods bought in Company.

Rule. [Cash Dr.] To my Partner his Account current for the Sum he paid me.

[His Account current] Cr. By Cash for the same Sum.

Case 3. When you (having the management of the Account in Company) give an Assignment to a Cr. upon your Partner for his Share of Goods bought in Company.

Rule. Make [the Receiver Dr.] To [your Partner his Account current] for the Sum in the Assignment.

And Partner's Account current Cr. by the Demander for the same Sum——

Case 4. When I receive Ready-Money for Goods sold in Company.

Rule. Make [Cash Dr.] To Wares in Company (always naming the Wares) between my Partner and Me (naming his Name and each of our Shares) for such Goods sold such a Person, so much their Value.

And [Wares in Company between such a one and me] Cr. By Cash for the same Sum.

Then make Partner's Account in Company] Dr. To his Account current for his Share of the Cash received.

And [Partner's Account current Cr.] By his Account by me in Company for the same Sum.

Note, if these Wares had been sold at time, the Entry had been much the same, if instead of making Cash Dr.

To

Accompts in Company.

To Wares in Company, you make the Buyer Dr. To the same Wares: And [Wares in Company Cr. by the Buyers, &c.]

Case 5. When Goods are sold in Company, part for Ready-money, and part at time.

Rule. Make Cash Dr. to Wares in Company, between my Partner and me, for the Money received in part.

And the Buyer Dr. To the same Account for the Money left unpaid: Then make Wares in Company between my Partner and me, Cr. by sundry Accounts (referring to the Folio's of Cash) and the Buyer's Account for the whole Value of the Goods sold.

2dly. [Make my Partner's Account in Company] Dr. To his Account currant, for his Share of the whole Value of the Wares sold.

And my Partner's Account currant Cr. By his Account by me in Company for the same Sum.

Case 6. When I bring into Company Wares of my own, that are enter'd in my Ledger.

Rule. Make [Wares in Company (naming their Names) between my Partner and me] Dr. to Wares (naming their Name again) in the Sum you bring them into Company for, naming for what Quantity, Price, &c.

Then make [Wares (as before enter'd in your Ledger) Cr. By the same Wares in Company between my Partner and me, for the quantity brought into Company at such a price.

2dly, Make Partner his Account currant Dr.] To my Partner's Account in Company for so much Goods brought into Company by me, of which his Share of the Price is so much.

Then make [Partner his Account in Company Cr.] By his Account currant for his said Share——

Case 7. When Wares bought for Comp. Account and Booked, are shipp'd off To be sold for the same Comp. Account.

Rule. Make [Voyage (to the place whither the Ship is bound, naming the Factor the Wares are consign'd to) in Company between my Partner and me] Dr. To Goods ship'd for their Value To Cash for Charge of Shipping, so much as paid for that. Then make [Wares in Company between my Partner and me] Cr. By [Voyage in Company between us] for their value. And [Cash Cr.] By Charges of Shipping. *2dly.*

ally, Make [my Partner his Account current Dr. To his Account in Company for his Share of the Charges of Shipping off. And

Ditto [Partner his Account in Company] Cr. By his Account current for the same Sum——

Case 8. When Wares are bought on Company Account to be paid for at Time, And are Ship'd off (and Charges paid) before Entry.

Rule. Make [Voyage to such a place in Company between my Partner and Me, consigned to our Factor] Dr. To the Selling-man for the Value of the Wares, and to Cash for the Charges of Shipping, &c.

Then make [the Seller Cr.] By Voyage to such a place, in Company between my Partner and Me consigned to our Factor, for the Value of the Goods Shipp'd, And [Cash Cr.] By Voyage in Company between my Partner and Me, consign'd to our Factor at such a place, for the Charge till on Board.

ally, Make [Partner his Account current] Dr. To *Ditto* Partner's Account in Company, for his Share of the Value of the Wares, and Charges till on Board.

And [his Account in Company] Cr. By his Account current for the same Share of the Value and Charges of Shipping:

Note. That if the Wares bought in this Case had been paid for in Ready-money, the Entry would be the same, with this Difference only; That whereas first, Voyage in Company, &c. is made Dr. to the Seller, and he Cr. by Voyage, &c. you must make [Voyage in Company, &c.] Dr. To Cash for the Value and Charges, And Cash Cr. By Voyage, &c. for the same Sum.

Case 9. When I receive Advice that Wares for Company Account are Sold by our Factor,

Rule. [Factor at such a place, for Company Account between my Partner (so much of the Stock) and (so much) me, our Account current Dr.] To Voyage to such a place in Company between my Partner and (Me naming our Shares) consign'd to *Ditto* Factor for the Nett proceed. as by Advice. And

Accompts in Company.

[Voyage to such a place in Company between my Partner and Me (naming our Shares of the Stock) consign'd to such a Factor] Cr. by Factor at such a place for Company Accompt between my Partner and Me, our Accompt currant for the said Nett proceed.

Case 10. When I receive Advice that our Factor hath made Abatement for Defect in Goods Sold (between my Partner and Me) in Company.

Rule. Make [Voyage to——in Company between my Partner and Me (naming our Shares always after the Name) consigned to——(Factor) Dr.]

To *Ditto* Factor for Company Accompt between my Partner and Me, for the Abatement for the Defect.

Then [Factor at such a place for Company Accompt between my Partner and Me, our Accompt currant]

Cr. by Voyage to——in Company between my Partner and Me, for the same Sum abated.

Case 11. When Money is remitted to me by our Factor, for Wares Sold, for Accompt of Company, and by me received.

Rule. Make [Cash Dr.] To Factor at—— for Company Accompt between my Partner and Me, our Accompt currant, for the Money received by Bill, and Factor at—— for Company Accompt between my Partner and Me, our Accompt currant] Cr. by Cash for the same Sum——

Then make [my Partner's Accompt in Company Dr.]

To *Ditto* Partner's Accompt currant for his Share in the Money received. And

[My Partner's Accompt currant Cr.] By Partner's Accompt in Company for the same Sum.

Note, That if this Money had been payable by Bill, at single or double Ufance, &c. the Entry would differ little, only instead of making [Cash Dr. to Factor, &c.] make his Accompt that accepteth the Bill, Dr. To Factor at—— &c. and *per contra* Cr.

Case 12. When I receive Wares from our Factor, in return for Wares Sold by him for Company Accompt, and pay Charges for Freight, Custom, &c. at Receipt thereof

Rule. Make [Wares received] Dr. To Factor at—— for Company Accompt between my Partner and Me, our Accompt

compt current for the Value of the Goods and Charges
 will on Board, as *per* Advice—so much.

And [Factor at — for Company Account between, &c.
 our Account current] Cr. by Wares received for the
 same Sum—

Then make [Wares received] Dr. to Cash for the Sum
 paid at the Receipt for Custom, &c.

And Cash Cr. By Wares received for the same Sum.

Then to place the Account between my Partner and
 Me.

Make [my Partner's Account in Company] Dr. to his
 Account current for his Share, as *per* Invoice of the
 Return. Deducting his Share of the Money you pay at
 the Receipt.

And [my Partner's Account current] Cr. by his Ac-
 count by me in Company for the same Sum.

Case 13. When I receive Advice that my Factor has Shipp'd off
 and consign'd Wares to our Factor in another Country,
 for Company Account.

Rule. Make [Voyage to—consign'd to our Factor for Com-
 pany Account between my Partner and Me,] Dr. to
 Factor at—(Viz. my Factor that Shipp'd the Goods)
 my Account current for their Value and Charges, as
per Advice of my Factor.

And my Factor (that Shipp'd the Goods) at—my Ac-
 count current Cr. By Voyage to—(Viz. the place our
 Factor residerh at) consign'd to our Factor, in Company
 between my Partner and Me, for the same Sum.

Then make [my Partner's Account current] Dr. To his
 Account in Company, for his Share of the Value and
 Charges. And

[My Partner's Account in Company Cr.] By his Ac-
 count current for the same Sum—

Case 14. When Wares are returned by our Factor, to my Fa-
 ctor in another Country, for Wares sold for Company,
 Account by our said Factor.

Rule. [Voyage to such a place consign'd to my Factor] Dr.
 To (our) Factor at—for Account of Company be-
 tween my Partner and Me, our Account current, for
 the Value of the Goods Shipp'd. And
 (Our) Factor at—for Account of Company, between
 my

Accompts in Company.

my Partner and Me our Accompt currant] Cr. By Voyage (to such a place) consign'd to [my] Factor for the said Value and Charges.

Then make [my Partner's Accompt in Company] Dr. To his Account currant for his Proportion, as per Advice received of the Accompt.

His Accompt currant Cr. By his Accompt in Company for the same Sum.

Case 15. When my Partner draws a Bill upon me payable at sight.

Rule. Make [Partner (naming his Name) his Accompt currant] Dr. To Cash for the Content of the Bill Paid.

And Cash Cr. By [my Partner's Accompt currant] for the same Sum.

Case 16. When you close an Accompt in Company, observe this

Rule. Make [Wares (&c.) in Company between my Partner] (naming his Share of the Stock, and so much me) Dr. To (sundry Accompts, for closing the Accompt, &c.

[To Profit and Loss] for my Share of the Gain by Trading [To Ditto] for my Provision (or Employment) at so much *per Cent.* as by Agreement. And

[Profit and Loss] Cr. By the Sum, your Provision and Share of the Gain amounts to.

Then Wares, &c. in Company (as before) Dr. To my Partner's Accompt in Company for his Share of the Gain And, &c. [His Accompt in Company Cr.] By Wares in Company for the same Sum.

Company Accompts are generally esteemed very difficult: But if a Person has a good Understanding in proper Accounts, and Factorage, he will find this very easy, there being little Difference more than this.

1. In the Title of an Accompt in Company, To take in your Partner's Name in Company, mentioning his and your Share of the Stock, &c.

2. After any thing is bought, sold, shipp'd off, receiv'd, &c. and Book'd as in a proper or Factorage Accompt (having respect to the Title of Company Accompt as aforesaid) you must take Care to make your Partner or Partner's Accompt currant Dr. To or Cr. By his Accompt in Company for what you lay out or receive for your Partner, which you will easily know how to do by the 16 Cases foregoing.

S. 7. The Method of keeping the Waste-book, Journal, and Ledger.

THE Waste-book of me C. D. of London, Merchant :
Containing all my Dealings from the First Day of
July, 1694.

In the Name of God. Amen.

An Inventory taken July the first, containing all my Estate in
Cash, Wares, and Debts, which I have at this Day. And also
what Debts are owing by me to others, &c.

	li.	s.	d.
My whole Estate this Day in Money, Wares and Debts is	3159	10	0
(Viz.)			
Item. I have in ready Cash	1540	00	00
Item. I have Druggs, viz.			
340 lb of Scammony at 10 s. per lb	170	00	00
565 lb of Opium at 6 s. per lb	169	10	00
105 C. Gallingle at 2 l. per C.	210	00	00
	549	10	00
Item. I have Raw Silk, viz.			
440 lb of Tripoli Belladine at			
16 s. per lb	352	00	00
650 lb Legee of Smirna at 12 s.			
per lb	390	00	00
1090 lb in all	742	00	00
Item. I have at Aleppo, consign'd to Gilbert Ginnuell my Factor there, these Norwich Wares remaining unfold, viz.			
18 Ser. Denims which cost 6 l. each	108	00	00
30 Grograms at 3 l. per piece	90	00	00
40 Barateens at 3 l. 5 s. each	130	00	00
88 pieces in all; which cost	328	00	00
	3159	10	00
Item. I am indebted to several Persons, viz.			
To William Richards due the 3d Instant	150	00	00
To Richard Nicholas to Ballance his Ac compt in my old Ledger	80	00	00
To Charles Rolling due the 30th Instant	140	00	00
To Simon Thuynebens due Aug. 3d.	140	00	00
	510	00	00

(The

1774

(2)

(The Method of the Entries in the Waste-book,)

July 2. 1694.

Sold *George Higgs* 300 lb of Scammony for ready Money at 20 s. 6 d. per lb.

li. s. d.
307 10 00

Ditto 10.

Bought of *Richard Nicholas* the *Norwich Wares* following, *viz.*

10 Grammas at 3 l. per piece 30:00:00
 14 Bariteens at 3 l. 6 s. per piece 79:04:00
 34 pieces in all, amounting to 109 04 00

109 04 00

Of which I have paid 80 l ready Money,
 And the rest, which is 29 l. 4 s. to be paid in 8 Days.

Ditto 15.

Received Advice from *Gilbert Guinwell* my Factor at *Aleppo*; that he hath sold to sundry Persons for my Account 60 pieces of *Norwich Wares*; the Nett proceed of which, as by the particulars in his Account on the File, is 1500 Dollars, the Exchange at 4 s. 6 d. per Dollar makes Sterling

337 10 00

Lent *George Higgs* the Sum of 500 l. for 3 Months, for which he is to pay me Interest at the rate of 8 l. per Cent. per Annum.

So that the Money lent (as entred into the Cash-book)

500

And the Interest thereof comes to

10

Ditto 19.

Sold *Williams Shors* the following Druggs, *viz.*

40 lb of Scammony at 21 s. per lb 42:00:00
 350 lb of Opium at 12 s. per lb 210:00:00

390 lb in all for

252

of which I have received 160 l. and the rest which is 92 l. to be paid the 30th Instant.

(The Method of the Entries in the Waste-book.)

July 20. 1694.

li. s. d.

Received from my Factor Gilbert Gainwell at Aleppo, by my Order, and on my proper Accompt, 8 Chests of Myrrh, containing 30 C. Nett, which at 22 Dollars per C. comes to 660 Dollars, the Exchange, at 54 s. per Dollar makes Sterling

148 10 00

Richard Nicholas hath assigned the 80 l. due to him from me, for the Ballance of his Accompt in my old Ledger to James Silver, which I have paid to ditto Silver on Demand

80 00 00

Ditto 25.

Gilbert Gainwell Factor at Aleppo, hath remitted to me 600 Dollars payable here at double Usance, by Matthew Cleffold, for the Value delivered there to Maboat Janexwar the 1st of April last, the Exchange at 4 s. 8 d. per Dollar makes Sterling
Which Bill is accepted.

140 00 00

Ditto 30.

Sold Alderman Ryley Mercer, the following Norwich Wares, viz.

10 Grograms, at 3 l. 10 s. per piece — 35:00:00
24 Barateens, at 4 l. 4 s. per piece — 100:16:00

34 Pieces at

135 16 00

For which he hath given me an Assignment on Peter Paygood, to be paid me in 8 Days, which I have accepted.

Sold Simon Strut the following Raw Silk for ready money, viz.

30 lb of Tripoli-Belladine, at 30 s. per lb — 90:00:00
60 lb Leges, at 24 s. per lb — 144:00:00

1000 lb in all, at

133 7 10 00

(The Entry of the Inventory in the Journal)

THE JOURNAL of me C. D. of London, Merchant, Containing all my Dealings from the First Day of July, 1694.

Fol. Ledger

In the Name of God. Amen.

An Inventory taken the first of July, 1694 of my present Estate in Money, Wares, and Debts, this Day owing to me, and what Debts are owing by me, &c.

	li.	s.	d.
Sundry Accountts are Dr. to Stock in the Sum of 3159 l. 10 s. for so much Cash, Wares, and Debt owing to me this day, viz.			
1 Cash for so much in Chest	1540	00	00
1 Druggs, viz.			
2 340 lb of Scammony at 10 s. per lb	170	00	00
1 565 lb Opium at 6 s. per lb	169	10	00
105 C. Gallingale at 2 l. per C.	210	00	00
	549	10	00
3 Raw Silk for 1090 lb, viz.			
1 440 lb of Tripoli Belladine at 16 s. per lb	352	00	00
650 lb Legee of Smirna at 12 s. per lb	390	00	00
1090 in all at	742	00	00
1 Voyage to Aleppo, consigned to Gilbert Gainwell my Factor there, for Norwich Wares remaining yet unfold, viz.			
18 Ser. Denims that cost 6l. each	108	00	00
30 Grograms at 3 l. per piece	90	00	00
40 Barateens at 3 l. 5 s. each	130	00	00
88 pieces in all, which amounts to	328	00	00
	3159	10	00
Stock is Debtor to sundry Accountts 510 l.			
Due to sundry Persons, viz.			
3 To Will. Richards due the 3d Instant	150	00	00
2 To Richard Nicholas for the Foot of his old Account	80	00	00
3 To Charles Rolling due the 30th Instant	140	00	00
4 To Simon Thynemans due Aug. 3d next	140	00	00
	510	00	00

The End of the Inventory.

(The

(The Method of Journal Entries.)

July 2. 1694.

		l.	s.	d.
1	Cash Debtor to Druggs for 300 lb of Scammony			
2	fold <i>George Higgs</i> for ready Money at 20s. 6d. per lb	307	10	00
Ditto 10.				
1	Norwich Wares Debtor to sundry Accounts 109 l			
	4 s. for 34 pieces bought of <i>Rich. Nicholas</i> , viz.			
	l s. d.			
	10 Grograms at 3 l. per piece	30	00	00
	24 Barateens at 3 l. 6 s. each	79	04	00
		109	04	00
1	To Cash paid <i>Ditto Nicholas</i> in part	80	00	00
2	To <i>Ditto Nicholas</i> , to pay him the 25th.			
	Instant	29	04	00
Ditto 15.				
1	<i>Gilbert Gainwell</i> at <i>Aleppo</i> my Account currant,			
1	Debtor to Voyage to <i>Aleppo</i> , consigned to <i>Ditto</i>			
	<i>Gainwell</i> the Sum of 337 l. 10 s. for the Next pro-			
	ceed of Wares sold, as per his Account for 150			
	Dollars, the Exchange at 54 d. Sterling per Dol-			
	lar, makes English Coin	337	10	00
3	<i>George Higgs</i> Debtor to sundry Accounts the Sum			
	of 51 l. for 500 l. lent him at Interest for 3 Months			
	at 8 l. per Cent. per Annum, viz.			
	l. s. d.			
1	To Cash for the Principal lent	500	00	00
3	To Profit and Loss for the Interest	10	00	00
		510	00	00
Ditto 19.				
2	Sundry Accounts Debtor to Druggs the Sum of			
	252 l. for 39 c. sold <i>W. Short</i> , as followeth, l. s. d.			
	40 lb of Scammony at 21 s. per lb	42	00	00
	350 lb of Opium at 12 s. per lb	210	00	00
	(viz.)			
		252	00	00
1	Cash for 160 l. received in part of <i>Ditto Short</i> .			
2	<i>Ditto Short</i> Dr. 92 l. he is to pay me the 30th Inst.			

(The Method of the Journal Entries.)

		li.	s.	d.
<i>July 20. 1694.</i>				
2	Druggs Debtor to Gilbert Gainwell at Aleppo my			
1	Account curreant, 148 l. 10 s. 00 d. for 8 Chests of Myrrh, poize Nett 30 C. at 22 Dollars per C. makes 660 Dollars, the Exchange at 54 d. per Dollar, is Sterling	148	10	00
<hr/>				
2	Richard Nicholas Debtor to Cash the Sum of 80 l. being the Ballance of an Account due to him, which I have paid James Silver by Affignation of Ditto Nicholas	80	00	00
<hr/>				
<i>Ditto 25.</i>				
2	Matthew Clessold Dr. to Gilbert Gainwell at Aleppo, my Account curreant, 600 Dollars by Bill remitted to me by ditto Gainwell payable at double U. fance for the Value delivered there, to Mahoat Fanezwar, the Exchange at 4 s. 8 d. per Dollar, is in English Coin	140	00	00
<hr/>				
<i>Ditto 30.</i>				
2	Peter Paygood Debtor to Norwich Wares the Sum of 135 l. 16 s. for 34 pieces fold Alderman Ryley, viz.			
	<i>li. s. d.</i>			
	10 Grograms at 3 l. 10 s. per piece	35	00	00
	24 Barateens at 4 l. 4 s. per piece	100	16	00
		135	16	00
<hr/>				
	For which Sum Ditto Paygood hath given me his Bill payable in 8 days by Affignation of ditto Ryley			
<hr/>				
1	Cash Debtor to Raw Silk 1337 l. 10 s. for 1000 lb sold to Simon Strutt for Ready money, viz.			
3	<i>li. s. d.</i>			
	350 lb of Tripoly Bellad. at 30 s. per lb	525	00	00
	650 Legee at 25 s. per lb	812	10	00
	1000 lb at	1337	10	00

Here ends the Journal.

(The

(The Form of the Book of Household Expences.)

		<i>Household Expences, Debtor.</i>		li	s.
1694	July 3	To Cash paid Daniel Dunmuck for 1 Quarter's Rent of my dwelling-House, due at Mid-summer-day last, in full	40	10	
	4	To Cash for my Pocket-Expences	4		
	15	To Cash paid my Wife for Apparel, &c.	50	14	
	30	To Cash paid Su. Sarvenone, the Housekeeper, for this Month	50	4	6
	31	To Cash for my Pocket-Expences	4		
		Carry'd to Cash-book, fol. 1.	149	8	6
		<i>(See how this is posted into the Cash-book, Cr. side.)</i>			

(The Form of the Book of Charges of Merchandize.)

		<i>Charges of Merchandize, Debtor.</i>			
		li	s.	d.	
1694	July 1	To Cash paid Lawrence Lovemoney for a Quarter's Rent of my Warehouse, due at Mid-summer-day last, and is in full	10		
	3	To Cash paid for Post-Letters		10	
	10	To Cash paid for Ditto		12	4
	20	To Cash paid Freight of 8 Chests of Myrrh	70		
		To Cash paid Custom of Ditto Myrrh	10	14	
	21	To Cash paid Wharfage, Crainage, &c. of Ditto, at 5 d. per Chest		3	4
		To Cash paid Cartage of ditto from the Key.		6	
	31	To Cash paid Porterage this Month		6	3
		To Cash paid Demurrage		4	
		Entred in Cash-book, fol. 1	92	15	11
		<i>(See how this Month's Charges of Merchandize is posted into the Cash book, Cr. side.)</i>			

*(The Form of the Cash-Book.)**London Anno Domini, 1694.*

		<i>Cash Debtor.</i>		<i>li.</i>	<i>s.</i>	<i>d.</i>
1694						
<i>July.</i>	2	To Druggs for 300 lb of Scammony sold <i>George Higgs</i> —————		307	10	
	19	To Ditto received of <i>Will. Short</i> in part ———		160		
	30	To Raw Silk received of <i>Simon Strutt</i> ———		1337	10	
	31	To <i>William Short</i> , received in full ———		92		
		Carried to fol. 1. in the Ledger ———		1897		
		<i>See how this Month's Account of Cash received is posted into the Account of Cash in the Ledger, Fol. (1.) Dr. side.</i>				

*(The Form of the Cash-Book.)**London Anno Domini, 1694.*

		<i>Per Contra Creditor.</i>	li.	s.	d.
1694	July.	3 By <i>W. Richards</i> , paid him in full ———	15c		
	10	By <i>Norwich Wares</i> paid <i>R. Nicholas</i> in part	8c		
	15	By <i>G. Higgs</i> , lent him at Interest for 3 Mon.	50c		
	20	By <i>R. Nicholas</i> , paid <i>James Silver</i> by Affig- nation ———	8c		
	25	By <i>Disso Nicholas</i> paid him in full ———	29	4	
	30	By <i>Charles Rolling</i> , paid him in full ———	140		
		By <i>Simon Thynemans</i> , paid him in part ———	3c		
	31	By Household Expences this Month, from fol. 1. ———	149	8	6
		By Charges on Merchandize this Month as on fol. 1. ———	92	15	11
		Carried to Ledger, fol. 1. ———	1251	8	5
<p><i>See how this Month's Account of Cash, paid is posted into the Account of Cash in the Ledger, Creditor-side, Fol. (1.)</i></p>					

*(The Method of the Ledger Entries.)**London Anno Domini, 1694.*

			fo	ll.	s.	d.
1694		<i>Stock Debtor.</i>				
July	I	To sundry Accounts, as per Inventory —		510		
		To Ballance —————	4	3546		01
				4056		01
1694		<i>Cash Debtor.</i>				
July	I	To Stock, then in Chest	I	1540		
	3	To sundry Accounts, as per Cash-Book, f. r.		1897		
				3437		
1694		<i>Norwich Wares Debtor.</i>				
July	10	To sundry Accounts for ————— 34	1,2	10904		
		To Profit and Loss gain'd by this Account.	3	2612		
				13516		
1694		<i>Voyage to Aleppo consign'd to G. Gainwell, Dr.</i>				
July	I	To Stock for Wares unfold —————	I	328		
		To Profit and Loss gain'd by this Account	3	1500206		
				4780206		
1694		<i>G. Gainwell my Account current Dr.</i>				
July	15	To Voyage to Aleppo consigned to ditto Gainwell —————	I	33710		

(1)
 (The Method of the Ledger Entries.)

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London, Anno Domini, 1694.

		<i>Per Contra Creditor.</i>		fo	li.	s.	d.
1694	July 1	By sundry Accounts, as per Inventory —		3	159	10	
		By Profit and Loss gained by 1 Mo. Trade		3	896	10	01
					4056		01
		<i>Per Contra Creditor.</i>					
1694	July 31	By sundry Accounts, as per Cash-book f. i.			125	108	05
		By Ballance resteth Cash —			2185	11	07
					3437		
		<i>Per Contra Creditor.</i>					
1694	July 30	By Peter Paygood for —	R 34	2	135		16
		<i>Per Contra Creditor.</i>					
1694	July 15	By Gilbert Gainwell my Account currant		1	337		10
		By Ballance for Wares unfold —		4	140	12	06
					478	02	06
		<i>Per Contra Creditor.</i>					
1694	July 20	By Druggs for 8 Chests of Myrrh —		2	148		10
		By Matthew Cleffold —		2	140		
		By Ballance due to me. —		4	49		
					337		10

*(The Method of the Ledger Entries.)**London, Anno Domini, 1694.*

		William Short, Debtor.		For	li.	s.	d.
1694	July 19	To Druggs, due the 30th Instant		2	92		
Druggs Debtor.							
1694	July 1	To Stock	C 105 905	1	549	10	
	20	To G. Gainwell, at Aleppo, my Account current	30	1	148	10	
		To Profit and Loss Gain'd		3	284	10	
					981	10	
Richard Nicholas, Debtor.							
1694	July 20	To Cash paid James Silver by Assignat.		1	80		
	25	To Cash paid him in full		1	290	4	
					1090	4	
Matthew Cressfold, Debtor.							
1694	July 25	To G. Gainwell at Aleppo my Account Cur.		1	140		
Peter Paygood, Debtor.							
1694	July 30	To Norwich Wares for 34 pieces		1	135	16	

(The Method of the Ledger Entries)

London, Anno Domini, 1694.

		<i>Per Contra Creditor.</i>		For	l ^{rs}	s.	d.
1694	July 31	By Cash received in full		1	92		
<i>Per Contra Creditor.</i>							
1694	July 2	By Cash for Scammony		1	307	10	
	19	By sundry Accounts		1,2	252		
		By Ballance rests unfold, viz. 215 lb of Opium at 6s. per lb 105 C. of Gallingle at 40s. per C. and 30 C. of Myrrh at 4l. 10s. per C. which in all cost		4	423		
					982	10	
<i>Per Contra Creditor</i>							
1694	July 1	By Stock		1	80		
	10	By Norwich Wares, to pay the 25 th Inst.		1	29	04	
					109	04	
<i>Per Contra Creditor.</i>							
		By Ballance due to me		4	140		
<i>Per Contra Creditor.</i>							
		By Ballance due to me		4	135	16	
B b							

*(The Method of the Ledger Entries.)**London Anno Domini, 1694.*

		For	li.	s.	d.
1694		George Higgs, Debtor.			
July	15	To sundry Accounts for Prin. and Int.	13	5	10
<hr/>					
1694		Profit and Loss, Debtor.			
July	31	To Household Expences	4	149	08 06
	31	To Charges on Merchandize	4	92	15 11
		To Stock gain'd by one Month's Trade	1	896	10 01
				1138	14 06
<hr/>					
1694		Charles Rolling, Debtor.			
July	30	To Cash paid him in full	1	14	00
<hr/>					
1694		William Richards, Debtor.			
July	3	To Cash paid him in full	1	15	00
<hr/>					
1694		Raw Silk, Debtor.			
July	1	To Stock	1090	1	742
		To Profit and Loss gain'd by this Account	3	667	10
				1409	10

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(The Method of the Ledger Entries.)

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London, Anno Domini, 1694.

			Fol.	li.	s.	d.
1694	<i>Per Contra Creditor.</i>					
July	31 By Balance due to me. —————	4	5	10		
1694	<i>Per Contra Creditor,</i>					
July	15 By G. Higgs, for Int. of 500 l. due Oct. 15th.	3		10		
	31 By Norwich Wares gained thereby ———	1		26	12	
	By Voyage to Aleppo, gained thereby —	1	150	02	06	
	By Druggs gained thereby —————	2	284	10		
	By Raw Silk, gained thereby —————	3	667	10		
			1138	14	06	
1694	<i>Per Contra Creditor.</i>					
July	1 By Stock —————	1	140			
1694	<i>Per Contra Creditor.</i>					
July	1 By Stock —————	1	150			
1694	<i>Per Contra Creditor.</i>					
July	30 By Cash —————	1000	1	1337	10	
	By Balance then rests unfold of Tropoly Belladine —————	90	4	0072		
				1409	10	

*(The Method of the Ledger Entries.)**London Anno Domini, 1694.*

		For	li.	s.	d.
1694	<i>Household Expences, Debtor.</i>				
July. 31	To Cash paid this Month	1	149	08	06
1694	<i>Charges on Merchandize, Debtor.</i>				
July 31	To Cash paid this Month	1	92	15	11
1694	<i>Simon Thuynemans, Debtor.</i>				
July. 30	To Cash paid him in part	1	30		
31	To Ballance due to him	4	110		
			140		
1694	<i>Ballance Debtor.</i>				
July. 31	To Cash resteth therein this Day	12	185	11	07
	To Voyage to Aleppo consign'd to G. Gainwell	1	140	12	06
	To G. Gainwell at Aleppo, my Account Cur.	1	49		
	To Druggs rests unfold, 215 lb of Opium at 6 s. per lb; 105 C. of Gallingle at 40s. and 30 C. of Myrrh at 4 l. 19 s. per C. which in all cost	2	423		
	To Matthew Clessold, for his Bill	2	140		
	To Peter Paygood	2	135	16	
	To G. Higgs for Principal and Interest	3	510		
	To Raw Silk, for 90 lb of Tripoli Bellad. resting unfold, which cost	3	72		
			3656		01

(The Method of the Ledger Entries.)

London Anno Domini, 1694.

		Fo	li.	s.	d.
1694	<i>Per Contra Creditor.</i>				
July. 31	By Profit and Loss —————	3	149	08	06
1694	<i>Per Contra Creditor.</i>				
July. 31	By Profit and Loss —————	3	92	15	11
1694	<i>Per Contra Creditor.</i>				
July. 31	By Stock —————	1	140		
1624	<i>Per Contra Creditor.</i>				
July. 31	By Simon Thuyne-mans, due Aug. 3. ———	4	110		
	By Stock —————	1	3546		01
			3656		01

190 *Ballance converted into an Inventory.*

Note, That the Transcript of the Debtor-side of the foregoing Ballance, will be an Inventory of your present Estate in Cash, Wares, and Debts; and of Creditor-side (leaving out Stock) what you owe, by which you carry on a new Account.

Viz.

An Inventory taken *August 1. 1694*, of my present Estate in Cash, Wares, and Debts due to me; and also of what Debts are owing by me to others, *&c. viz.*

	<i>l. s. d.</i>
<i>Imprimis, I have in ready Cash</i> _____	2185:11:07
<i>Item, I have at Aleppo, consigned to G. Gainwell, Norwich Wares remaining unfold, which cost</i> _____	140:12:06
<i>Item, G. Gainwell oweth me for Wares sold by him, and their Value not returned to me</i> _____	49:00:00
<i>Item, I have Druggs by me unfold, viz.</i>	
<i>l. s. d.</i>	
Opium 215 lb at 6 s. per lb	64:10:00
Galling. 105 C. at 40s. per C.	210:00:00
Myrrh 30 C. at 47. 19s. per C.	148:10:00
_____	423:00:00
<i>Item, Matth. Cleffold oweth me upon Bill</i>	140:00:00
<i>Item, P. Paygood oweth me by Assignat.</i>	135:16:00
<i>Item, G. Higgs oweth me upon Bond</i> —	510:00:00
<i>Item, I have Raw Silk unfold, viz. 90 lb of Tripoli Belladine, at 16 s. per lb, cost</i> _____	72:00:00
	_____ 3656:00:01

On the contrary, the Debts I owe are as follows.

Viz.

To *Simon Thugnewans*, due the 3d Instant. _____ 110:00:00

The best Form of an Alphabet.

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To your Ledger you must have an Alphabet, for the ready finding every Account, whether Proper or Factorage, Domestic or Foreign, as Men, Wares, Voyages, Profit and Loss, and Accounts current, &c. the Method whereof let be thus; of having a Page (or as there is Occasion) for each Letter:

Viz.

	C.		
. . . .	Cash	_____	Fol. 1.
. . . .	Charges of Merchandise	_____	4
Matthew	Clefield	_____	2
	D.		
. . . .	Druggs	_____	2
	G.		
Gilbert	Gainwell my Account current	_____	1
	H.		
George	Higgs	_____	3
. . . .	Household Expences	_____	4
	N.		
. . . .	Norwich Wares	_____	1
Richard	Nicholas	_____	2
	P.		
Peter	Paygood	_____	2
. . . .	Profit and Loss	_____	3
	R.		
Charles	Rollings	_____	3
William	Richards	_____	3
. . . .	Raw Silk	_____	3
	S.		
. . . .	Stock	_____	1
William	Short	_____	2
	T.		
Simon	Thuynemans	_____	4
	V.		
. . . .	Voyage to Aleppo, consign'd to G. Gainwell.	_____	1

§. 8. How to post an Account.

What Posting an Account is, is shewed in the Dictionary following, and in the Method I have here laid down for Book-
ing. Accounts are either posted,

1. Out of the Waste-book into the Journal; or,
2. Out of the Books of Household Expences and Charges of Merchandize into the Cash-book; or,
3. And principally, out of the Journal and Cash-book into the Ledger.

1. In posting out of the Waste-book into the Journal, you are to observe what is said in the Account given of the Journal, Chap. 10. to which I need add nothing, the Directions there, and Examples of the several Parcels in the foregoing Journal posted out of the Waste-book compared together, being sufficient to instruct the Learner how any Waste-book Parcel is posted into the Journal.

2. Whatever is paid on Account of House-keeping, &c. as is directed in the Account of the Book of Household Expences, Chap. 10. Or, on Account of Charges of Merchandize, as you will find at the beginning of the said Chap. must, when a Month (as *January, February, &c.*) is ended, be summ'd up, and entered on the Creditor side of the Cash-book, as you will see in the Examples of these Books foregoing, which will make it plain.

3. The chief and most considerable part of Posting is that of the Journal and Cash-book into the Ledger, especially of the Journal; which, to make as plain as I can, take the following Example, by which you will know how to post all the rest.

Example.] The 10th Day of *July 1694*, I find in the Journal *Norwich* Wares Debtor to sundry Accounts, To post which into the Ledger, I first turn to the Ledger, to see what Folio is vacant, or has room on it, which I find the 1st; therefore I turn to the Alphabet, and on the Folio Letter (N) I write [*Norwich* Wares, fol. 1.] as you see in the annext Alphabet; and then in the Ledger on fol. 1. I enter, in a fair large hand [*Norwich* Wares Dr.] in one Line, and under that the Month and Day; then [To sundry Accounts] which Accounts being Cash and *R. Nicholas's*, the first entered on Folio 1, the second on Folio 2; I write Folio 1, 2, in the Line after [To sundry Accounts] as you see in the Example, and the same in the long Column in the Journal.

nat. And then I consider, That if *Norwich Wares* is Debtor to sundry Accounts, fol. 1, 2, viz. To Cash and *R. Nicholas's*, then it follows, that Cash and *R. Nicholas's* Account must be Creditor By *Norwich Wares*; I therefore turn to *R. Nicholas's* Account, which having before found to be on fol. 2. I enter on the Creditor-side of his Account the Month and Day; then [By *Norwich Wares*] so much as left due to him, referring to the Folio on which *Norwich Wares* stands, viz. fol. 1. which write likewise in the Journal against *Norwich Wares*. Then I should turn to Cash in the Ledger, and make that Creditor by *Norwich Wares*; but that being done in the Cash-book, 'tis sufficient if at the end of the Month I make Cash Creditor in the Ledger By sundry Accounts for all the Money paid that Month, referring to the Folio in the Cash book which that Sum is brought from: And likewise I make Cash in the (Ledger) Debtor to sundry Accounts for all the Money receiv'd that Month, as you see by the Cash-book and Account of Cash in the Ledger foregoing. By this Example, and comparing the Entries in the several Books foregoing, you will easily know how to Post any Account.

But Note, That in all Accounts of Wares you must keep in a Column next the left Hand of the Folio Column, the Pieces, Pounds, Yards, &c. bought of any Commodity, and likewise what is sold; so will you easily see how much of any sort of Goods remains unsold, without telling or numbering the same in the Warehouse; as in the Account of *Norwich Wares*, Druggs, and Raw Silk foregoing.

And when you have posted your Journal, you must likewise post your Cash-book for that Month, or rather post both together, taking the Days of the Month in due course; i. e. Where Cash is made Debtor to a Person for Money receiv'd, due formerly, and for which he is made Debtor in the Ledger; you must take care to give such Persons Credit for the Cash paid, which Cash being only entered in the Cash-book, you must therefore post from the Cash book. And the like where Money is paid for any Debt, the Person to whom the Cash is paid must be charged Debtor to Cash, as you will see in the Cash-book foregoing; Money received from *William Short*, *William Short* has Credit for it. And on the Creditor-side of the Cash book *Richard Nicholas*, *Charles Rolling*, *William Richards*, *Simon Thuyne-mans*, Household Expences, and Charges of Merchandize, are

each made Debtor in their several Accounts in the Ledger, To Cash paid, referring to the Account of Cash in the Ledger, and in the Account of Cash in the Ledger, referring to the Folio of the Cash-book, and entering that Folio in the Column of the Ledger-folio. For your further Information (if any is needful) see the Cash-book and the Account given thereof at the beginning of this Chapter.

§. 9. *Directions for Closing an Account.*

What Closing an Account is, is shewed in the Dictionary; and all Accounts are closed either,

1. With Profit and Loss; or,
2. With Ballance; or,
3. With Profit, and Loss, and Ballance; or,
4. With Stock.

1. All Accounts of Goods or Wares; where all that was bought is sold, are closed with Profit and Loss, which is entered on the Debtor-side of the Account (if you gain thereby) or on the Creditor-side if you lose; of this the Account of *Norwich Wares* fol. 1 is an Example.

2. All Accounts of Men are closed with Ballance on the Debtor-side if I owe to them, as the Account of *Simon Thynemans*, Folio 4; or on the Creditor-side if they are indebted to me, as the Account of *Matthew Cleffold*, fol. 2.

3. All Accounts of Wares, where all that are bought are not sold, are closed with Profit, and Loss, and Ballance, *i. e.* with Profit and Loss on the Debtor-side for the Sum gained by what is sold, and with Ballance on the Creditor-side for what the Goods remaining unfold cost; as in the Accounts of Drugs and Raw-Silk.

4. No Accounts are closed with Stock, but Profit, and Loss, and Ballance; as in the Example following.

§. 10. *How to Ballance your Books.*

Having shewed how to close any Account, it will not be difficult to Ballance either a single Account or your whole Ledger, in order to know how much Cash, Wares, and Debts you have; what Debts you owe, and what you have gained by Trading since your last general Ballance.

1. To

Directions for Ballancing Accounts. 195

1. To Ballance any single Account, Sum up the Debtor and Creditor-sides, and put their Totals on a piece of waste Paper, where take their difference, which is the Ballance, and must be entered on the Debtor or Creditor-side, as is taught in Closing an Account; which done, the Sum of the Debtor and Creditor-sides shall be equal.

But Note, That in an Account of Wares the said Difference is Profit or Loss, and must be entered on that side whose Sum is least, to make the Sums of Dr. and Cr. sides equal; as taught before.

But to Ballance your Ledger for the end abovementioned.

Rule.] Take a Sheet of Paper, and on one side write [*Ballance Debtor*] as you see in the foregoing Account of Ballance; and on the other side write *Per Contra Creditor*, as the Sheet lies extended before you.

2. Close and Ballance all your particular Accounts beginning with Cash, (except Stock, and Profit, and Loss) which having done throughout your Ledger,

3. Begin again at the Account of Cash, and where an Account is closed with Ballance, enter the same on the contrary side of the Account of Ballance in your Paper, as in the Account of Cash foregoing [*Cash is Creditor*] by Ballance 218*l.* 11*s.* 7*d.* therefore Ballance (on your Paper) must be made Dr. to Cash 218*l.* 11*s.* 7*d.* so in the Account of *Simon Thuyne* he is made Dr. to Ballance, and therefore Ballance must be made Cr. by *Simon Thuyne*.

Likewise where an Account is closed with Profit and Loss, enter the Ballance Sum on the contrary side of the Account of Profit and Loss; as in the Account of *Norwich Wares*, which is closed Dr. to Profit and Loss 26*l.* 12*s.* 00*d.* therefore Profit and Loss must be Creditor by *Norwich Wares*, as you see in the Account of Profit and Loss.

And where you meet with an Account closed both with Profit and Loss, and Ballance, as that of [*Voyage to Aleppo*, consign'd to *G. Gainwell*] is, because Ballance is on Cr. side, make Ballance on your Paper, Dr. to *Voyage to Aleppo*, &c. 150*l.* 12*s.* 6*d.* And because the said Account of *Voyage*, &c. is Dr. to Profit and Loss, make the Account of Profit and Loss Cr. for the like Sum, viz. 150*l.* 2*s.* 6*d.* And thus having guided you thro' the several Cases that may happen, proceed with the rest of the Accounts to the End of your Ledger (leaving Profit and

and Loss unclos'd, till you have clos'd and ballanc'd the rest of the Accounts, except Stock, as before taught; then

4. Close the Account of Profit and Loss with Dr. To or Cr. By Stock, and carry the foot to the contrary side of the Account of Stock, as in the Example of the foregoing Account of Profit and Loss clos'd with [Dr. to Stock 896*l.* 10*s.* 1*d.*] Stock must therefore be made Cr. by Profit and Loss 896*l.* 10*s.* 1*d.*

5. With the Difference of Dr. and Creditor-sides of Ballance, viz. with Dr. To, or Cr. By Stock, close the Account of Ballance, and carry the Foot to the Account of Stock; as in the foregoing Account of Ballance, it is so clos'd, Cr. by Stock 3546*l.* 00*s.* 01*d.* therefore Stock must be Debtor to Ballance 3546*l.* 00*s.* 01*d.*

6. Lastly, Sum up the Dr. and Cr. sides of the Account of Stock, and if they Ballance, or are alike, your Books have been kept right, otherwise you have committed some Error. For this is
(*A General Rule for Ballance.*)

Your present Stock and what you owed when you began the Account now ballanc'd, will be always equal to your Stock when you began your Accounts, and what you have gained since, to the Day the general Ballance is made. And the Reason of this is plain: For my former Stock and what I have gained since must be my present Stock; as in the Example foregoing of Stock, my former Nett Stock (Debts deduct'd) is 2649*l.* 10*s.* 00*d.* and I have gained since, as appears by the Account of Profit and Loss 896*l.* 10*s.* 01*d.* the Sum of which is 3546*l.* 00*s.* 01*d.* = my present Stock. But if (because the Method of the Account of Stock requires it) I add my Gross Stock when I began Trade to what I have since gained, the Sum will consequently be just so much more than my present Nett Stock as was the Sum I owed when I began Trade; which if I therefore add to my present Stock; the Sum must be equal to my former Gross Stock and the Sum gained, as 'tis plain in the Example;

For if 2649*l.* 10*s.* - 510*l.* + 896:10:01 be = 3546:00:01;
Then it follows,

That 3159*l.* 10*s.* + 896:10:01, is = 3546:00:01 + 510*l.*
(Note, That (-) is less, (+) more, and (=) equal to.)

CHAP. XI.

Maxims for Young Merchants, concerning the Customs and Practice of Merchants, with respect, 1. To Bills of Exchange. 2. To Factors and Factorage. Laws for Brokers, Brokerage, &c.

§ 1. Concerning Bills of Exchange.

1. **I**N Drawing a Bill the Drawer ought to respect, 1. The Place where and Time when the Bill is Drawn, and in a Foreign Bill the Exchange agreed on. 2. The Time when the Content of the Bill is payable. 3. To whom. 4. The Sum to be paid. 5. The Exchange in Words at Length. 6. Of whom the Value is received. 7. To whose Account it is to be placed. 8. The Drawer's Name. 9. A Direction thereof to him on whom the Bill is Drawn; as you will see in the Example following, under Chap. 15.

2. Bills are either Foreign or Inland.
3. Inland Bills are such as are Drawn and payable in the same Country, which ought to be payable a certain Time after Date.
4. A Bill Drawn to pay at Sight, is payable 3 Days after the Acceptor first seeth it.
5. Inland Bills were never used to be Protested until an Act made for that purpose, 10 W. 3. Which Act contains as follows.
 1. That the Value must be mentioned to be received, and not omitted as it is the Custom of most Drawers of Inland Bills.
 2. The Money, must be payable a certain number of Days, Weeks, or Months after Date.
 3. The Acceptance must be in the Acceptor's Hand writing; not a verbal acceptance, as most of your London Shop-keepers will only do.
 4. The Protest must not be made until 3 days after the Bill is payable.
 5. The Protest must be returned to the Drawer, within 14 Days after Protest is made.
 6. If not returned in that time, the Person Neglecting, to pay all Cost Damage and Interest.
 7. If any Bill be lost within the time limited for payment, the Drawer shall be obliged to give another Bill of the same Tenure with the first, upon security to indemnifie him in case the Bill so lost shall be found again.
 8. This Act extends not to Bills under 5l. no more than to such as are not accepted in Writing, or those that do not mention the Value received.

6. Foreign

6. Foreign Bills are such as are drawn in one Country to be paid in another.

7. Foreign Bills are for the most part payable at single, double or treble Usance.

8. Usance is the Space of Time between any Day of one Month, and the same Day of the next following, as from *January* the 4th to *Feb. 4.* *July 4th* to *Aug. 4.* &c. when the place where the Bill is drawn and that where it is payable both compute their Time by one Style, as both by Old or both by New; except at some particular places, where through Custom Usance is sometimes more than a Month.

9. There is likewise a customary Allowance of certain Days after the single, double, &c. Usance, before a Bill is payable; and this more in one Country than another.

10. So that before it can be justly told when a Foreign Bill is due there are these Things to be considered:

1. What Usance is esteem'd with respect to several Countries.

2. What places reckon their time by old and what by new Stile.

3. What days are allowed for Payment of a Bill in several Countries over and above their single, double, &c. Usance.

11. Usance from *London* to and from *Middleburgh, Rotterdam, Amsterdam, Antwerp, Bruges,* and other parts of the *Low-countries,* is 1 Month after the Date of the Bill, double Usance 2 Months, &c.

Usance from *Venice* or *Florence* to *London* in 3 Months.

Usance from *Lisbon* to *London* and *Antwerp* is 2 Months.

Usance from *Hambourg* to *London* and *Contra* is two Months.

Usance from *Antwerp* to *Rome* and *Venice* is 2 Months.

Usance from *Genoa* to *Antwerp* is usually two Months.

12. The Account of Time with respect to New and Old Stile are as follows.

These places reckon by New Stile.

Amsterdam, Rotterdam, Antwerp, Leyden, Harlem, Middleburgh, Ghent, Brussels, Brabant, and most of the *Netherlands:* Also *Paris, Lyons, Marseilles, Bourdeaux,* and all *France;* *Lisbon, O Porto, Cadix, Bilboa,* and all the rest of *Spain* and *Portugal;* all *Italy* and *Venice:* Also in *Germany* all the Popish Electors and Princes, *Amburg, Linz, Cremet, Wien, Dantzick* and all *Poland.*

These places reckon by O. Stile, which is 11 Days after the New.

England, Scotland and *Ireland,* all the Protestant Electors and Princes of *Germany, Copenhagen* and all *Denmark;* *Embden,* the Protestant Cantons of *Switzerland, Hamburgh, East Frickland,*

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Genera: All Sweden, Holstein, Lubeck, Strasbourg; all Saxony, Riga and Leypfick.

13. The time allowed in several places for the payment of Bills over and above the time mentioned in the Bills, is,

Days	
Rotterdam	— 3
London	— 3
Paris	— 10
Roan	— 5
Hamburg	— 12
Antwerp	— 14

} is allowed, according to Custom,
after the time in the Bill.

14. If a Bill is payable at Usance, it is payable 1 Month after the Date of the Bill. As if A. at Amsterdam drew a Bill on L. at London, payable at Usance dated March the 2d; here I consider that Usance is 1 Month, i.e. April the 2d. But because they reckon their time by New Stile, or 11 Days before us at London, therefore I take 11 Days from April 2, and the Remainder is March 22, to which add the 3 Days of Grace according to the Custom of London, and the Sum is March 25th, on which Day, before the Sun goes down, the Bill is due and payable by L.

15. A Merchant may deliberate 24 Hours before he needs to accept a Foreign Bill.

16. But if he refuseth after 24 Hours Consideration to accept that Bill, the person to whom the Bill is payable may protest it in the Office of Publick Notary.

17. Protests are usually made (with relation to Foreign Bills) either

1. For Non-acceptance.
2. For better Security; or,
3. For Non-payment.

18. If the Person on whom a Foreign Bill is drawn refuse to accept the same you must take a Publick Notary to be a Witness of the Refusal (which is Noting a Bill) and protest against him for Non-acceptance; (the Form of a Protest you have in the Chapter following of Merchants Precedents: This must be done, as must all other Protests, between Sun and Sun in the day time. And tho' the Merchant you protest against be not at home, the Protest is nevertheless valid if done by a sworn Publick Notary, at the person's House or Lodging on whom the Bill is drawn.

19. Protests are made for better security when the Acceptor of a Bill proves insolvent, or of bad repute.

20. Af

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20. After these Protests are drawn on a piece of paper under a Copy of the Bill, and entered in the Publick Notary's Books, the said Protest and Copy of the Bill are returned to him that paid the Value, but not the Bill it self, unless afterwards by express Order of the Remitter.

21. Upon the Receipt of a Protest of a Bill the person that paid the Value takes it, and goes to the Drawer to whom the Value was paid, who must give better Security if the Protest was made therefore; or if it was made for Non-acceptance, the Drawer must either give better Advice to the Person who formerly refused to accept the Bill, or else a new Bill on some other, together with security for the payment of all Charges of Protest, &c.

22. If a Foreign Bill become due and is not paid, he to whom the Money is payable must protest for Non-payment, and return the Protest and a Copy of the Bill to the deliverer of the Value, as before, who must demand the Money of the Drawer to whom the Value was paid, and of the Security if the Bill had been formerly protested for Non-acceptance or better Security. But if the Bill was accepted but not paid, then he that paid the Value upon receipt of the Protest, may oblige the Person to whom the Value was paid, to give good Security for the speedy payment of the Principal Money, with all Charges, and upon Refusal may recover the same at Law.

23. The person to whom a Bill is payable must take Care to demand it on the very day it becomes due.

24. The Charge of noting and protesting Bills are as follows.

	s.	d.	
For Noting a Foreign Bill	{ within the City —	1	6
	{ without the City —	2	6
For Protesting a Foreign Bill	{ within the City —	3	0
	{ without the City —	5	0
	An Inland Bill —	—	6

25. If any one pay a Bill of Exchange (as is too frequent upon Kebate, &c.) before it be due, and he to whom the Money is so paid proves Insolvent, before the Time the Money is payable by the Bill, the Remitter upon Advice of his Friend's Insolvency, orders the Money to be paid to some other, which not being done, he will recover great damages of the Drawer and Acceptor of the Bill, if not the whole Content thereof.

26. If a Bill of Exchange be left for Acceptance, as is common,

Money, at the request of the Person on whom it is drawn, or his Servant; and if it be mislaid or not to be found to return to the Presenter in due time, when he shall demand the same, the person on whom it is drawn shall give him to whom it is payable his Note under his Hand and Seal to pay the Money according to the Bill, which if he refuseth to do, the Person to whom the Money is payable may protest for Non-acceptance and Non-payment, as tho' he had the Bill; otherwise the Custom of leaving Bills for Acceptance would be dissolved, and the course of Trade greatly obstructed.

27. If an accepted Foreign Bill be lost by him to whom it is payable, he must in the presence of a Publick Notary, signify the same to the Acceptor, who when the Bill becomes payable shall pay the Money, notwithstanding the Bill is lost, upon Bond or other Writing given him to bear him harmless, or to be a sufficient Voucher for the Payment of the Bill. But if the Acceptor deny to do this, he to whom the Money is payable may protest, when the Money is due, for Non-payment, and recover the same by due course of Law.

28. There can be no revoking an accepted Bill, but the Acceptor is become absolute Debtor to him, to whom the Bill is payable for the Content thereof.

29. If the Person to whom a Bill is payable die before it be due, there must be demand made however of the Money on the Day it becometh due. And if upon offering good Security to save the Acceptor harmless from any Action, &c. of the Executors and Administrators of the Deceased he refuse to pay, you must cause Protest to be made, as is common for Non-payment.

30. If the Party that accepted a Bill die before it become due, demand must be made of his Executors or Administrators on the Day the Bill is payable, and if they refuse to pay the Bill, Protest must be made for Non-payment as if the Acceptor were living, and had refused to pay the same.

31. The Drawer of a Bill ought at the same time to give his Correspondent a Letter of Advice, That he has drawn a Bill upon him, at such a Time, for such a Sum payable to such a Person, where he must insert the Sum payable both in Words at length and Figures, with other things, as mentioned in Article the first foregoing.

32. No one ought to pay a Bill without a Letter of Advice, nor any Sum by Letter of Advice, where a Bill is mentioned to be drawn, because much Damage may ensue upon several Accounts.

33. If the Sum in Words at length and Figures in a Bill of Exchange do not agree, it is safest to take that Sum which agrees with the Letter of Advice, whether it be that in Figures or Words at length, because it cannot be supposed two Mistakes should happen just alike, in writing a sum three times, tho' one Mistake may be very probable. But if the three Sums all differ in the Bill and Letter of Advice, the best way is to take that Sum for true which is in Words at length in the Bill, tho the safest way is to send with all speed to the Drawer for fresh Advice. For if he on whom the Bill is drawn refuse to accept it, there can no Protest be made Because the Sum is uncertain, tho' if the second Bill be of the same Date with the first, there will be no time lost to the Persons to whom it is payable.

34. In drawing of Foreign Bills, it is usual, and very proper to draw two or three of the same Tenor and Date, and to send them in so many several Letters of Advice, that in case one miscarry, the course of Exchange and Trade may not be retarded or interrupted thereby. And in this the Drawer must be sure to take care, if he draws 2 Bills, to say in the 2d Bill, at such a time pay this my 2d Bill of Exchange [my first not paid]. Or if he draws 3 Bills, to say in the 2d [my first and third not paid, &c.] and in the first [my 2d and 3d not paid, &c.] and in the 3d [my 1st and 2d not paid unto, &c.] otherwise he on whom the Bills are drawn, might through a mistake pay more than one of the Bills.

35. If a Bill be presented for Acceptance, and he on whom it is drawn will accept it only to pay part of the Bill, or at a longer time than is limited in the Bill, the Person to whom it is payable must protest for Non-acceptance, as is before directed. But when the Bill becomes due, and the Payer is willing to pay part; such part may be receiv'd, and Receipt given for it on the back-side of the Bill, and Protest must be made for Non-payment of the Remainder.

36. The Acceptance of a Bill by a Wife or Servant, or any other, not having an Order in Writing under Hand and Seal so to do, from the Person on whom a Bill is drawn, is invalid, and is no legal Acceptance, unless it can be proved that such Wife, Servant, &c. used to accept Bills for such Person, the custom of which will go a great way in making the Acceptance sufficient.

37. Verbal Acceptance of a Foreign Bill is sufficient, provided it be done before Witnesses. But the safest way is to cause him

him on whom the Bill is drawn; to underwrite the Bill in these Words [Accepted by me A. B.] Or if the Bill is drawn at so many Days sight, then the Acceptor must put the Time when he accepts it; because on that depends the time of Payment, thus [Accepted July 4. 94. by me A. B.]

38. It is counted ridiculous among Merchants, to say in a Bill of Exchange [*pray pay, &c.*] it being proper and Merchant-like to say [*pay, &c.*] 1st. Because Bills of Exchange are to have such Honour and Respect as not to [*pray*]. 2d. Because Merchants being supposed Men of great Business, write only what is absolutely necessary, avoiding all Complements and superfluous Expressions. 3d. Because for the most part the Acceptor of a Bill has Effects in his Hands of the Drawer's equivalent to the Content of the Bill, which the Drawer may demand at Pleasure.

39. There are four Persons principally concerned in all Bills of Exchange. 1. The Remitter of the Money. 2. The Drawer or Indorser, who receives the Money, and gives his Bill for it to the Remitter. 3. The Person on whom this Bill is drawn; and 4. Him to whom it is payable. Of these the Remitter, and he to whom the Bill is payable, are Correspondents; and so are the Drawer and he on whom the Bill is drawn: So that the Drawer is answerable for his Failure on whom the Bill is drawn; and he that paid the Value to him that is to receive it: And in default of Payment of a Bill, he to whom it is made payable certifieth the same to him of whom the Value was received, who presently takes his Course with the Drawer to whom the Value was paid, both for his Own and His Security to whom the Bill is payable; all which ought to be thoroughly considered, before you can have any tolerable Notion of the Mysteries of Exchange..

Obj. But some may say, That if the Person to whom a Bill is made payable, can recover his Money of the Acceptor by due course of Law without protesting, and not otherwise with protesting, to what purpose are Bills protested?

Ans. Because in case of Protesting, he to whom the Bill is payable has the Security of the Drawer, Acceptor, Indorsers, and him that paid the Value for his Money, and may Sue all or which he pleaseth by the Custom of Merchants; but he can only sue the Acceptor, and him that paid the Value, if the Protest be not made.

40. If you pay a Debt with a Bill that is payable to you or Order, you must first write your Name on the backside of the

Bill, which is Assigning it, as practised among Traders. But if you pay a Debt with a Note payable to such a one or Bearer, then you only deliver the Note. And it is Wisdom in Bankers, &c. that pay part of a Bill or Note, to make the Indorsement cross that part which is most wrote on, to avoid Deceit by taking off the Indorsement.

§. 2. Concerning Factors, their Power, Duty, Commissions, &c.

To make this Section Useful and Intelligible, it will be necessary to shew,

1. What a Factor is.
2. Commission to a Factor.
3. The Power of a Factor.
4. The Duty of a Factor.
5. Factorage, or Provisions due to Factors.
6. Factors, called Brokers, what they are, their Business and Provision due to them, according to Statute.

I. A Factor is one that is employ'd to buy and sell any kind of Merchandize for another, and differeth from a Servant in this; That whereas a Servant or Apprentice doth Business for a yearly Salary, or for nothing but his Charges, and serveth only his Master; a Factor doth Business for so much in every hundred Pounds worth of Goods he selleth or buyeth; which is called his Commission or Provision (as shall be shewed by and by) and is employed for several Merchants or Traders at the same time, and is not their Servant but their Factor or Correspondent.

II. Commission to a Factor, is the Order or Condition given to him by his Employer, for buying or selling any Commodity, by which he is to act.

All Commissions are either Absolute or Limited.

1. An absolute or perfect Commission is when an Employer gives his Factor free Power to buy, sell or barter a Commodity at Discretion, or as he thinks fit; in which Commission are usually these Words [*Buy (or Sell) such a Commodity as the Market goes;*] or [*as to Price I leave it wholly to you, and desire you to act as for your self.*]

But a limited Commission doth bind or tye the Factor to a certain Price for the buying or selling any kind of Merchandize; in which Commission are usually these Words [*Buy (or sell) such a Commodity as so much, or if you cannot, let it alone.*] Or [*If you cannot sell such a Commodity, at such a price, keep it till further Order.*] And sometimes the Word [*Commission*] is used for [*Provision*] as above.

III. The

III. The Power of a Factor dependeth on his Commission; and if he act contrary to that, he is liable for what Losses ensue thereby. Thus, if a Factor have a limited Commission, which orders him to sell Goods for ready Money, he has no Power to give any time, for if he does, and the Buyer proves Insolvent, the Factor must be responsible for the same to his Employer; but if this Factor had order to give time, and in that time the Buyer prove Insolvent, the Factor having observ'd his Commission, the Loss shall be his Employers. Or if a Factor have an absolute Commission to sell Goods to whom and what time he thinks fit, then hath he the same Power with the Merchant or Employer, and is not answerable for any Loss that may be the Consequence of his Dealing, but hath likewise power to make Composition with any one that breaks or proves Insolvent, and to abate as much of a Debt due to his Employer as he pleaseth, provided his Abatement is no more than the rest of the Creditors have done.

IV. As to the Duty of a Factor, I shall shew it in most Cases as briefly as I can; which is,

1. To be very exact in observing his Commission or Order of his Employer.

2. To be often advising the Rise or Fall of the Commodities his Employer deals in, and what sells best, and of the Course of Exchange.

3. To answer all Letters punctually and in time; but especially,

4. A Factor is obliged to advise his Employer whenever he buyeth or selleth, shippeth off, or receiveth Goods: For if he sells a parcel of Goods, and neglects to give Advice thereof, and in the mean time the Buyer proveth Insolvent, the Factor shall pay the Debt, altho' he had an absolute Commission as aforementioned; for no Man giveth Commission to have his Goods sold and not to know of it, tho' the Commission be absolute with respect to the manner of Selling.

5. If a Factor (says *Malyns*) sells Goods for his own account to another payable at time, and receiveth the same when it is due, and in the mean time letteth other Mens Money remain in that Man's Hand unpaid, for Goods by him formerly sold; this Factor is to be answerable for that Money to those other Men, altho' he should never recover a Penny of it, for he cannot without Fraud bear with the non-payment of other Mens Money when due, and procure the Payment of his own.

6. If a Factor buy a Commodity according to Commission, and afterwards the Price advanceth, and the Factor fraudulently converteth the Gain thereby to his own Use, the Merchant in this Case may recover Damages of his Factor, by the Custom of Merchants upon Proof thereof.

7. If a Factor, by the Advice of his Employer, buy a Commodity with his Employer's Money, or by his Credit, and his Factor without Advice selleth the same again for his own Benefit, the Merchant shall recover this Gain of the Factor, and shall be moreover amerced for the same.

8. If a Factor sell his Employer's Goods to a Man Discredited, and that Buyer afterward breaketh before Payment, the Factor shall pay for the said Goods, unless he can prove that he was ignorant of it, and that he trusted the Man for Goods of his own also.

9. If a Factor do by false Entry in the Custom-House conceal part of the Custom, without advice of his Employer, whereby the Goods became forfeit to the Prince, the said Factor shall answer the Value thereof to his Employer as they cost, if for Goods to be Transported, or as they might have been sold, if it be for Goods to be imported.

10. If a Factor or Merchant procure a Merchant Stranger Goods to pay but *English* Customs by saying they are his own; such Factor or Merchant shall forfeit all his Goods to the Queen.

11. If a Factor makes any Return to his Employer for the Nett Proceed of Goods sold, in Prohibited Goods, without Commission, the Factor shall bear the Loss or Damage; but

12. If a Factor do any unlawful Act by Order of his Employer, the Employer shall make good the same, and the Factor shall pay treble Damage.

13. If a Factor be robb'd of his Employer's Goods, he shall bear the Loss.

14. If a Factor buyeth Goods which afterwards become damaged by Accident, the Merchant or Employer shall bear the Loss.

15. A Factor is only chargeable with the Money which he receives for Goods sold by him, &c. but if any part prove false Coin or bad, he is to make it good.

16. If a Factor by Bill of Exchange maketh a Sum of Money payable to a Person, that breaks before the said Bill is due to be paid; the Factor in this Case may and ought to countermand his Bill from the Acceptor, which if he have paid the broken Merchant before due, he is answerable for the same to the Factor.

17. If a

17. If a Factor have Orders from his Employer to assure Goods, &c. for a certain Voyage, and have Money in his hands sufficient to pay the *premium*; if this Factor neglect the same, and do not Insure, and the said Ship or Goods perish at Sea; the Factor shall be answerable for the Damage to his Employer, unless he give very undeniable Reason why he did not Insure.

18. If a Factor, having made Assurance upon Goods, &c. which happen to be lost, and the Factor having no Order, *Libra* (or Commission to act at Discretion) maketh Composition with the Assurers, he shall be answerable to his Employer for what Abatements he maketh as well as for the rest that was Assured.

19. If a Factor do wrong to a Merchant by Errors in Accounts, he is to make good the same, not only the Principal, but also of the Interest thereof; and the contrary, if the Factor happen to wrong himself by not charging the Merchant, and it is therefore usual for all Factors in their Account of Sales or Invoyses, to write at the foot of the Account [*Errors excepted.*]

20. Captains of Ships, &c. who do wilfully destroy any Ship, shall suffer Death, by a Statute of Queen Ann.

V. Factorage Provision or Commission is the Wages of a Factor, and is so much to the Factor for every hundred Pounds Value of the Proceed of Goods bought or sold by the said Factor, which Provision is usually more or less, according to the distance of the Factory or place of Trade; thus,

A Merchant at *London* alloweth his Factor.

At <i>Barbadoes</i> and most o- ther parts of the <i>West-Indies</i>	5
At <i>Smirna</i> or <i>Aleppo</i> and other parts of <i>Turky</i>	3
At <i>Leghorn</i> and other parts of <i>Italy</i>	2½
<i>Spain</i> , <i>Portugal</i> or <i>France</i>	2
<i>Hamburg</i> and other parts of the <i>East-land</i>	2
<i>Rotterdam</i> and other parts of the <i>Provinces</i>	1½
Inland Factors have usually	1½

Commission for buy-
ing and as much for
selling.

Which Factorage or Commission Money is inserted among the other Charges the Factor has been at concerning his Employer's Goods, as Warehouse Room, Brokage, Wharfage, Custom, &c. and

and being deducted out of the total Sum the Factor sold his Employer's Goods for, the Remainder is called the Nett proceed of the Account.

VI. Brokers are a kind of Factors, there being Brokers for almost all kind of Traders, who are usually decay'd Merchants or Men that know their Trade well, but perhaps have not a Stock to set up to trade themselves, having great Acquaintance, they are employ'd by Merchants to bring Customers to buy their Merchandize, for which the Merchants usually allow the Brokers about half *per Cent*. These Men are mostly of known Integrity, and upon the Broker's word, the Merchants often give the Buyers Credit for many hundred pounds worth of Goods.

There are also other kind of Brokers, *viz.* Exchange-Brokers, and Brokers of Stock.

Exchange-Brokers make it their Business to know the Alteration of the Course of Exchange; and to inform Merchants that have Money to receive or pay beyond Sea, who are proper Persons for exchanging or doing thereof; as if I have 100 *l.* Sterling to be paid at *Rotterdam*, &c. the Exchange-Broker finds me out a Man to whom if I pay the Money here, will give me his Bill drawn upon his Correspondent to pay the like Sum there to my Factor or Order. Or if I have 1000 *l.* to receive here from my Factor at *Hamburg*, &c. this Broker will find me out a Person that will pay me the Money here, on Condition of my Bill drawn on my Factor to pay the like Sum in *Flemish* Money to his Correspondent there; for which he has Brokage (as also to other places) $2 s.$ *per* hundred Pound Sterling.

Brokers of Stock are such as buy and sell Shares in Joint Stocks for any one that shall desire them; as if I am minded to buy two Shares in the *East-India* Stock, I speak to a Broker if he knows of any to sell, he enquires and finds one that will sell two Shares, which the Broker buyeth for me at the Price current on the Exchange, and when the same are transferred to me in the Company's Book, I pay for them. And it has been usual to give these Brokers for their Brokage or Provision as followeth,

	<i>l.</i>	<i>s.</i>	<i>d.</i>
For <i>Hudson's-Bay</i> Stock	01	00	00
<i>East India</i>	00	10	00
<i>Africa</i> Stock, or other petty Stocks, as <i>Glass, Lead,</i>	00	05	00
<i>Linnen, Copper, &c.</i>			

} *per* Share.

And at this Rate there are some have got 1000 or 1500 *l.* *per* *An.*

But

But now the number of Brokers and their Brokage are limited by a Statute made Anno 8. and 9. Will. III. and Rev. 11. and 12. W. III. for 7 Years from Michael. 1700, and since Reviv'd, which being requisite to be known both by Brokers, Merchants, and other Traders, I have inserted the Heads thereof, as follows.

1. No Person shall follow the Employment of a Broker, nor act as such within the Bills of Mortality of the City of London, until he be admitted by the Lord-Mayor and Aldermen of the said City.

2. All Brokers shall at their Admittance take an Oath truly and faithfully to perform that Office between party and party without Fraud or Collusion, according to this Act.

3. All Brokers within 3 Months after such Admittance, shall take the Oath of Allegiance and Supremacy, as by the Statute 1 W. and M. and shall sign the Association appointed by an Act 7 W. III. and shall enter into a Bond to the Lord Mayor, Citizens and Commonalty, of the Penalty of 500 l. (the Condition to which, as in this Act verbatim is expressed, you will find in the Chapter of Precedents following.

4. The Number of these Brokers (including all sorts beforementioned, viz. Exchange, Trade, and Stock-Brokers) are not to exceed 100.

5. The Fees paid by a Broker at his Admittance shall not exceed 40 Shillings.

6. The Names of the Brokers admitted, shall be affix'd on the Royal Exchange, Guild-Hall, and other publick places; as the Lord Mayor, &c. shall think fit.

7. Any one using the Trade or Employment of a Broker, who is not legally admitted, shall forfeit 500 l. over and above all other Forfeitures by this Act.

8. And if any Person employ any Broker that is not thus legally sworn and admitted, such Person shall forfeit 50 l.

9. And if any Person not being a sworn Broker, according to the true intent and meaning of this Act, shall deal as a Broker in discounting Tallies, Exchequer Bills, Bank Bills or Notes, or in Stock-jobbing, or selling of Bank-Stock, or to any other Interest or Security upon any Fund granted by Parliament: Such Person offending shall forfeit 500 l. and being legally convicted shall stand in the Pillory 3 several Days one Hour in the Morning of each Day.

10. Every sworn Broker admitted as aforesaid, shall keep a Book, which shall be called the Broker's Book, wherein shall be fairly entered all Contracts and Bargains, within 3 Days after making thereof, therein inserting the Buyer and Seller's Names, to the end such Book may be pro-

duc'd when lawfully required; and the Broker omitting to keep such Book shall forfeit 50*l*.

11. Any Broker taking above 10*s*. per Cent. (i. e. per hundred pound value of the thing bought or sold) for Brokerage, shall forfeit 10*l*.

12. All Brokers legally sworn and admitted according to this Statute, shall carry about them a Silver Medal, having on one side his Majesty's Coat of Arms, and on the Reverse the Arms of the City of London, with the Name of such Broker, who shall at the concluding of all Bargains, Contracts, and Agreements by him made, produce such Medal to the Parties concerned, or shall forfeit 40*s*. for every Omission.

13. And if any Broker lawfully admitted shall deal for himself in Exchange or Remittance of Money, or shall buy any Tallies, Orders, Bills or Share, or Interest in any Joint Stock, to be assigned or transferred to his own Use; or shall buy any Goods, Wares, Merchandize to sell again for his own benefit, or shall make any gain or profit in buying or selling any Goods over and above the Brokerage, he shall forfeit 200*l* and being convicted shall be incapable to Trade, Act, or Deal as a Broker for any person whatsoever,

14. All Contracts entered into or made by any person whatsoever, to be performed after the first of May, 1697. and upon which any Premium already is, or shall hereafter be given for Liberty to put upon, Accept, Receive, Deliver or Refuse any Share or Interest in any Joint-Stock, Tallies, Orders, Exchequer Bills, Exchequer Tickets, or Bank Bills whatsoever (except such Contracts of the nature aforesaid as are to be performed within 3 days, to be accounted from the time of making the same) is, and shall be utterly null and void; and every such Premium shall be paid back and restored to those that gave the same, their Executors, Administrators or Assigns.

15. And if any Premium shall be given or paid contrary to this Act, or if any Person shall Trade or Deal as a Broker, not duly admitted according to this Act, and the same shall come to the Knowledge of the Broker, if he doth not forthwith make Discovery, but shall conceal such Offence, upon due proof thereof before the Lord Mayor and Court of Aldermen of the City of London against such sworn Broker, he shall be displaced, and be for ever incapable to act or deal as a Broker for the future.

16. The Forfeitures given by this Act shall be recovered by Action of Debt, Bill, Plaint or Information, in any of his Majesty's Courts of Record at Westminster, in which no Essoin, Priviledge, Protection, or Wager of Law shall be allowed, and but one Imparlance, the one Adaiety whereof shall be to the use of the Queen, Her Heirs and Successors, and the other to the Prosecutor.

17. Provided that no person for buying and selling Corn, Cattle, or other Provision, or Coal, shall be esteemed a Broker within the meaning of this Act.

18. That no Broker shall buy, sell, or bargain for Money, any Tallyet or other Securities upon any Fund granted by Parliament, unless he be licensed so to do by any of the three Lords of the Treasuries under the penalty of forfeiting 500 l. Vide also the Stat. 6. Queen Anni.

As to Pawn-Brokers or Tally men, I think it not worth while to say any thing of them, but the Reader may find what they are in the Dictionary following.

C H A P. XII.

Sheweth the Products or Commodities produc'd by all the Countries in the World, with the chief Towns of Trade and Bigness of the Country, compared with England.

1. Great Britain produceth these following.

BESIDES the various kinds of Cattel, Deer, Fowl, (wild and tame) Fish, Grain, Fruits of the Field, Orchards and Gardens, &c. which would be too tedious, and not so proper for my present Subject, there are very fine and great abundance of Sheeps-Wool, as that of *Herefordshire*, *Leicestershire*, and the *Ile of Wight*, which maketh Woollen Cloth (near as fine as the *Spanish*), as that of *Devonshire*, *Gloucestershire*, *Yorkshire*, &c. Stuffs, as those of *Norwich* Crape, *Grögrams*, *Barateens*, *Camlets*, *Calamanco*, *Anterines*, *Paragons*, &c. of *Exeter*, as *Says*, *Semperernums*, *Perpetuano's*, &c. *Druggets*, *Serges*, *Fustians*, *Bays*, *Silks*, *Velvets*, *Sattins*, *Flannels*, *Linnen-Cloth*, and *Flax*, and *Hemp*, on which they are made; also very good *Paper* made of *Linnen-Cloth*, *Hats*, *Rugs*, *Bed-ticking*; excellent *Leather* of almost all sorts; *Tin*, *Copper*, *Lead*, *Allome*, *Copperas*; good *Silver* and *Iron*, and things made thereof; *Stockings* of all Sorts, as *Silk*, *Worsted*, *Woollen* and *Thread*; all

sorts of Ironmongers Wares, Tallow, Hides, Oyls, Hops, Butter, Cheese, Honey, Wax, Glew, Salt-petre, Gun powder, Tobacco-pipe, Brick, Lyme, Slate, Marble, Alabaster, and other Stones little inferiour to Diamonds; Salt, Soap, Pot-ashes, Glass, and Saffron the best in the World; Sea-Coal, and Scots Coal, in the North called *Cannel*; Liquors of Malt and Apples, &c. as Beer, Ale, Syder, Perry, Methglin, Brandy, Mum, also Mead, besides several sorts of Wines not much inferiour to those of *Spain* and *France*, as Elderberry, Strawberry, Gooseberry, Raspberry, and many others. It containeth 38 Counties of *England*, 16 Counties of *Wales*, and 35 of *Scotland*; Chief City *London*; and of Trade, *London*, *Bristol*, *Liverpoole*, *Newcastle*, *Hull*, *Plymouth*, and *Norwich* in *England*; *Edinburgh*, *Aberdeen*, *St. Andrews*, *Glasgow* and *Lisb* in *Scotland*.

2. *Ireland produces these Commodities,*

Wool, Yarn, (excellent good) Flax, Linnen-Cloth, Furrs, Hides, Tallow, Hemp, Honey, Wax, Herrings, and many other Sorts of Fish; Frizes, Rugs, Salt-beef, Pipe-staves, Cattel (black and white) Butter, Cheese, Salt, Wheat. (and most other Grains,) Iron, Lead. It containeth 32 Counties, the chief Towns of Trade, *Dublin*, *Kingsale*, *Galloway*, *Limerick*, *Drogheda*. This Country is about $\frac{1}{2}$ of *England*.

3. *France produces these Commodities chiefly,*

Wines, Paper, Almonds, Corral, Linnen Cloth (as Dowlas, Lockrams, &c.) Salt, Brandy, Silks, Velvets, Buckrams, playing Cards, Glass, Wheat, and all kind of Grain, Rosen, Prunons. It containeth 12 Governments, besides the Dutchy of *Lorraine* and *French Compté*; *Paris* is the chief City, but the chief for Trade are *Nantz*, *Bordeaux*, *Lyons* and *Morlaix*. This Country is near 3 times as big as *England*.

4. *The Low Countries, or 17 Provinces chiefly produce,*

Tapestry, Fine Linnen, Silks, Velvets, Ropes, Butter, Cheese, Buffs, Leather, Ox-Hides, Armour, Bruges Thread, Chimney-Backs, Steel, Hopps, Brushes, Grograms, Camblets, Fine Tape, Bottles, Pots, large Horses, Salt, Soap, Sword-Blades, &c. Chief City of the 7 *United Provinces*, *Amsterdam*, and of the 10 *Spanish*, *Antwerp*; and chief of Trade *Amsterdam*, *Rotterdam*, *Bruges*, *Antwerp* and *Middleburgh*. These 17 Provinces are about $\frac{1}{3}$ of *England*.

5. *Spain and Portugal produce chiefly these Commodities.*

Wine, Wool, Mader, Sugar, Oyls, Almonds, Anchoviss, Anniseeds, Figs, Raifons, Bayberries, Oranges, Lemons, Saffron,

Iron, Soap, Iron, Allom, White Marble, Licoras, Shumack, Cork, Wood, Rice, Silk, and Lamb-Skins: It is divided into 29 Kingdoms and Provinces, the chief Town is *Madrid*; but the chief for Trade are *Bilboa, Cadix, Lisbon, Galicia, Barcelona, Malaga* and *Sevil*; and is more than twice as big as *England*.

6. Italy, (including the Commonwealth of Venice) produceth chiefly these Commodities,

Sarfanets, Velvets, Taffata's, Fustians, Cloth of Gold and Silver; Wine, Cottons, Currans, Rice, Raw-Silk, Allom, Vitriol, fine Glafs, Grograms, Thrown-Silk, Sattin, Corn, Oyl, &c. Its divided into 12 Provinces, besides the Isles of *Sicily, Sardinia* and *Corfica*; the chief City of all which is *Rome*, but the chief of Trade are *Legborn, Venice, Genoa, Milan, Messina* and *Palermo*. This Country is (with the Isles) as big as one and a half of *England*.

7. Germany produces chiefly these Commodities.

Wool, Steel, Lattin, and Iron-wire, Fustians, Lead, Cope-ras, Allom, Hams, Linnen-Cloth, Yarn, Paper, Bell-metal, Quicksilver, Mum, Rhenish Wine, Tinn, and many Iron-works: It is divided into 10 Circles, the chief City is *Vienna*, of Trade, *Vienna, Norremberg, Quedlinburg, Brunswick, Emden, Strasburgh, Frankfort, Cologne*. This Country is more than 3 times as big as *England*.

8. Sweden, Norway, Denmark, and Places about the Baltick Sea, produce

Ox-hides, Goat and Buck-Skins, rich Furrs, Metals, Oak, Firr, Honey, Tallow, Bow-staves, Ashes, Cables, Canvas, Masts, Dale and Clap-boards, Pitch and Tarr, Cordage, Ropes, Hemp, Flax, Linnen, Yarn, Stockfish, Wax, Waincote, Wheat, Rye, &c. Chief Towns of Trade, *Hamburg, Copenhagen, Stockholm, Wiborg, Sleswick, Lubeck, Bergen, Calmar, Abo, Notteburgh, Bremen, Narva, Leipsick* and *Riga*; these contain 12 Provinces or Parts. *Sweden* is twice as big as *Denmark*, and together, they are more than 4 times as big as *England*.

9. Poland produceth chiefly.

Masts for Ships, Linnen, Pitch, rich Furrs, Wax, Boards, Salt, Amber, Ashes, Milk, Butter, Cheese, Rosin, Soap, Corn. It is divided into 12 Provinces, chief Town is *Cracaw*, and of Trade, *Dantzick, Wilna, Warsaw, Cracaw* and *Breste*. This Country is about 3 times as big as *England*.

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10. *Russia, or Muscovy, produceth chiefly*
Fine Leather, Furrs, Martins, Sables, Train Oyl, Wax, Honey, Slad, Hemp, Flax, Iron, Salt-petre, Brimstone, &c. It is divided into 37 Provinces, chief Town *Moscow*, and of Trade *Moscow, Archangel, Kola* and *Regun*. This Country is about 12 Times as big as *England*, but a great part of it is uninhabited.

11. *Turky in Europe produceth chiefly*
Wines, Oyl, Mettals, Damasks, Velvets, Vitriol, Sulphur, *Turky* Grograms, &c. It contains 18 Provinces; chief Town is *Constantinople*, and of Trade, *Nisoli, Misitbra, Corfu, Salonichi, Belgrade, Adrianople, Setimes*, and *Bialograd* or *Budixjack*. This Country is about 5 times as big as *England*.

12. *Turky in Asia, produceth*
Raw Silk, Cotton-Wool, Druggs, as Opium, Gauls, Rubarb, &c. Soap, Camlets, Tapestry, excellent Balm, Wine, Oyl, Cotton-Yarn, Mohair, Honey, Goats-hair, Worsted, Box-wood, and many other Commodities of lesser Note. This is that part of the World which the *Famous Turkey Company* bring all their rich Ships from, and it is divided into 3 Parts, *Natolia, Syria*, and *Armenia*, and they are subdivided into 19 Beglerbegg, besides the Isles of *Cyprus* and *Rhodes*, &c. The chief Towns of Trade are *Aleppo*, (the Chief of this Country) *Scanderoon, Smyrna, Famagusta* (in *Cyprus*) *Marax, Acsar, Bursa, Tarso, Cogni, Amasia, Acta, Ham, Tripoli, Scham, Damas, Gaza, Jerusalem, Arzerum*, and *Bahora*. This Country is about 6 times as big as *England*, to which adding the *Turks* Dominions in *Europe*, and those in *Africa*, as *Egypt*, with part of *Barbary, Abyssinia* and *Zauguebar*, makes the whole *Turks* Dominions about 18 times as big as *England*, which is but $\frac{1}{12}$ of the whole Earth, altho' they are vulgarly accounted $\frac{1}{2}$ thereof.

13. *Arabia produceth chiefly*
Gold, precious Stones, Coffee, Cinnamon, Myrrh, Balm, Frankincense, Benjamin, Manna, Cassia, Tea, &c. Chief Towns of Trade are *Medina*, (chief of the Country,) *Mecca, Aylan, Horatt, Funama, Ziden* and *Dhafar*. This Country is about 15 times as big as *England*, and borders *South West* on the *Red Sea*, where the Children of *Israel* passed through on dry Land.

14. *Persia produceth chiefly*
Precious Stones, especially rough Diamonds; Manufactures of Gold and Silver, rich Silks, Carpets, Sele-skins, Goat-skins, Ala-

Chief Towns of Countries.

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Albaster, Myrrh, Frank, and almost all sorts of Metals: Chief Towns of Trade are *Ispahan* (the chief of this Country), *Ormus*, *Suiser*, *Siapor*, *Sirat*, *Lar* and *Tauris*. This Country is about 23 times as big as *England*.

15. The East-Indies produce chiefly

Callicoes, Canes, Cottons, Velvets, Silk, Taffata's, Carpets, Muslain, Indigo, Aloes, Sattins, Salt-petre, Spices, Amber, Borsax, Ambergreece, Rhubarb, Wormseed, Sal-Armoniac, Rice, Tea, Fans for Women, Cornelion Rings, Aggats, rough Diamonds; Pearl, China-Ware, Cocoa-Nutts, Cinnamon, Ginger, Pepper, Caffia, Gold and Silver, Proceline Earth, Bengalés and Albaster. Chief Towns of Trade are (on this side the Peninsula or nearest Part of *India*, on the *Malebar* Coast) *Surat*, *Bombay*, *Cambay*, *Goa* and *Daman*; and on the farther side the Peninsula, on the *Cornandel* Coast, &c. the chief Towns are *Fort St. George*, *Bissnagar*, *Malapour*, *Negapitan*; *Ingghley*, *Balescar*, and *Agra* the Seat of the Great *Mogul*: Also *Acbin*, *Bencouh* and *Indrapore* English Factories on the Coast of the Island of *Sumatra*, which (tho' near) are not in the Territories of the *Mogul*. This Country of the *Mogul's* Empire is about 19 times as big as *England*.

16. China and Tonquin produce chiefly

Gold, Silver, precious Stones, Proceline Dishes, China-ware, Quicksilver, China-wood, Sugar, Cottons, Silks, Camphire, Rhubarb, Civet, Musk, Ginger. Chief Towns of Trade are *Pekin*, *Cachao*, *Kiangning*, *Hangchen*, *Cinan*, *Hain*, *Domea* and *Quangeben*. This Country of *China* is about 18 times as big as *England*, and is said to have in it 1485 Cities.

17. Tartary produce chiefly

Rich Furrs, as Sables and Martins; Musk, Cinnamon, Silk, Flax, Camlets; Rhubarb, and other Druggs. This Country is the biggest Empire in the World, being 70 times as big as *England*, tho' the N. E. is little known.

18. Georgia produce

Beyers, Martins, and other Furrs; Leather, Wax, Linnen, Thread, Honey. Chief Towns of Trade, *Yessis*, *Sophis* and *Zitach*. This Country is about 3 times as big as *England*.

19. Africa produce chiefly

Gold, Ambergreece, Elephants-teeth, Guinea-pepper, Redwood, Hides, Wax, Sanders, Sugar, Civet, Oyl, Cordovans, Hemp, Flax, Dates, Almonds, Indigo, Gum, Offrich feathers,

Am-

Amber, Ebony, Canes, Rice, Citrons, Lemons, Copper, Cocoa-nuts, Cloves, Saffron, Crystal, and abundance of Negroes, which furnish our Plantations in *America* with Slaves. In this Country the Royal *African* Company have had several Factories along the Sea-Coast, between *Guinea* and the *Cape of Good Hope*, at *St. James's Fort* in the River *Gambia*, *Sierra-Leona*, *Shardro*, *Madre-Bomba*, *Cape Misserado*, *Carmontyn*, *Emaebam*, *Rio-Nano*, the *Ivory Coast*, *Widdab*, and *Cape Corse Castle* on the *Gold Coast*, some of which are now under the *Dutch*. There are likewise many curious Towns of Trade or Ports in *Barbary*, as *Sally*, *Morocco*, *Tangier*, *Fez*, *Centa*, *Algiers*, *Sanba-Cruz*, *Saphia*, *Tripoli* and *Barca*. And the *Madagascar* Isle produceth *Ginger*, *Cloves*, *Red Sanders*, *Saffron*, *Wax*, *Amber*, *Gum*, *Ebony*, *Christal*, *Cocoa-nuts* and *Metals*. Chief Towns of Trade, *Charemboule* and *Fausbere*. *Africa* is about 120 times as big as *England*, and the Isle of *Madagascar* is near 2 times as big as *England*.

20. *America* produceth chiefly,

1. About the *North Part*, the *Hudson's Bay* Company bring *Bever* and other rich *Furrs*, *Whale Oyl*, *Stock-Fish*, &c. Their chief Towns and Places of Trade are *Inquebet*, *Quebeck*, *Port-Nelson*, *Hudson's Bay*, *Padousack*, *Brest* and *Port-Royal*. 2. The middle part produceth these excellent Commodities, viz. *Cotton-wool*, *Sugar*, *Tobacco*, *Furrs*, *Indigo*, *Ginger*, *Cloves*, *Mace*, *Nutmegs*, *Rosin*, *Turpentine*, *Copper*, *Tarr*, *Deal-boards*, *Gold*, *Silver*, *Pearls*, *Cocoa-nuts*, *Cocheneal*, *Honey*, *Balm*, *Amber*, *Hides*, *Tallow*, *Salt*, *Medicinal Drugs*, *Logwood*. Chief Towns of Trade are *Boston* and *London* in *New England*, *New York*; *Philadelphia* in *Pensilvania*; *Oxford* in *Maryland*; *James Town* and *Wiccomoco* in *Virginia*; *Charles Town* in *Carolina*; *Port-Royal*, *Sevil*, and *St. Jago* in *Jamaica*; *Antego* and *Barbadoes* in the *Charibbee Isles*, and also *Portobell*, *Panama*, *Cartagena*, *Curasao*, *Caracco*, *Porto Rico*, *Acapulco*, *Mexico* and *Vera Cruz*. 3. The *South Part* of *America* produceth, beside *Venison*, *Fish* and *Fowl*, *Gold* and *Silver* in abundance, *Balsam*, precious *Stones*, *Long-pepper*, *Gums*, *Rosin*, *Drugs*, *Cottons*, *Tobacco*, *Cocheneal*, *Brasil-wood*, *Sugar*, *Train-Oyl*, *Brass*, *Iron*, *Copper*, *Honey*. Chief Towns of Trade, *Caramanta*, *St. Magvel* and *Morequinso* in *Firm-land*; *Poston*, *Cusco*, *Lima*, *Guiaquill*, *Buesa*, and *Creux de Nueva* in *Peru*; *St. Salvado*, *St. Vincent* and *St. Sebastian* in *Brasil*; *Assumptio*, *Conception*, *Villa-Rico* and *Cividad* in *Paraguay*; and *St. Jago*, *Mon-doo* and *Serona* in *Cbili*. This Part of the World, called *America*, is about 90 times as big as *England*.

C H A P. XIII.

Concerning the New Rates of Post-Letters, as by the Statute, Anno Nono Reginae (or 9th of Q. Ann). And other Things in that Act relating to Merchants.

Foreign European Letters and Packets.

		English Money.							
		Single.		Double		Treble.		Ounce.	
		s.	d.	s.	d.	s.	d.	s.	d.
France.	FROM any Part of France, } to London ————— }	0	10	1	8	2	6	3	4
Spain and Portugal, through France.	From London, through France, } to any part of Spain or Portugal, (Post paid to Bayon) } and the contrary ————— }	1	6	3	0	4	6	6	0
Italy thro' France.	From London, through France, } to any part of Italy or Sicily, by the Way of Lyons: } Or to any part of Turkey, by the Way of Marcellia; and } on the contrary ————— }	1	3	2	6	3	9	5	0
Netherlands.	From any part of the Spanish } Netherlands to London ————— }	0	10	1	8	2	6	3	4
Italy thro' the Netherlands.	From London, through the Spanish } Netherlands, to any part of Italy or Sicily, (Port paid to Antwerp; and on the } contrary ————— }	1	0	2	0	3	0	4	0
Germany, Denmark, Sweden, Switzerland, and.	From London, through the Spanish } Netherlands, to any part of Germany, Switzerland, Denmark, Sweden and all } parts of the North, and the } contrary.	1	0	2	0	3	0	4	0

Rates of Post Letters.

		English Money.							
		Single.	Double	Treble.	Quar.				
		s. d. s.	d. s. d. s.	d. s. d.	d. s. d.				
To Spain thro' the Netherlands.	From London through the Spanish Netherlands to any part of Spain or Portugal; and the contrary.	1	6	3	0	4	6	6	0
	From any part of the United Provinces to London	0	10	1	8	2	6	3	4
United Provinces.	From London through the United Provinces, for any part of Italy or Sicily; and the contrary	1	0	2	0	3	0	4	0
	From London through the United Provinces to any Part of Germany, Switzerland, Denmark, Sweden, and all parts of the North; and on the contrary	1	0	2	0	2	0	4	0
Germany, Switzerl. Denmark, Sweden.	From London through the United Provinces, unto any part of Spain or Portugal; and the contrary	1	6	3	0	4	6	6	0
	From London, through the Spanish Netherlands, or the United Provinces, to Hambourg (Port paid to Antwerp or Amsterdam); and the contrary	0	10	1	8	2	6	3	4

By Packet-Boats.

Between London, Spain or Portugal — 1 : 6 | 3 : 0 | 4 : 6 | 6 : 0 |

Ireland Letters and Packets.

From London to Dublin, and the contrary; and not coming from, or directed on board a Ship — 0 : 6 | 1 : 0 | 1 : 6 | 2 : 0 |

From

Rates of Post Letters.

	English Money.				
	Single	Double	Treble	Ounce.	
	s.	d.	s.	d.	s.
From <i>Dublin</i> to or from any Place, not exceeding 40 English Miles from the Chief Office in <i>Dublin</i> , and not coming from or directed on Shipboard	0	2	0	4	6
If above 40 Miles from <i>Dublin</i> , and within the Kingdom	0	4	0	8	1

North Britain Letters and Packets.

From <i>London</i> to <i>Edinburgh</i> , and the contrary: And to and from <i>Dumfries</i> or <i>Cockburnspath</i> , and between either of those Places and <i>Edinburgh</i> , not coming from or directed on Shipboard	0	6	1	0	1
From <i>Edinburgh</i> , not exceeding 50 Miles in <i>Scotland</i> , and not directed on nor from on board a Ship	0	2	0	4	6
From any place above 50 and not exceeding 80 Miles in <i>Scotland</i> from <i>Edinburgh</i> , and not coming from, nor directed on Shipboard	0	3	0	6	9
And if to or from places above 80 Miles from <i>Edinburgh</i> in <i>Scotland</i> , &c.	0	4	0	8	1

Note, That Writs, &c. Inclosed, are liable to pay in proportion to the Ounce, respectively in Great Britain and Ireland.

English, or South British, or Inland Letters are Rated thus.

From <i>London</i> to or from any place, not exceeding 80 Miles distance from <i>London</i>	0	3	0	6	0
And to or from any place above 80 Miles from <i>London</i>	0	4	0	8	1

Rates of Post Letters.

American Letters and Packets: viz.

	English Money:				
	Single.	Double	Treble	Quar.	
	s.	d.	s.	d.	s.
All Letters and Packets passing from <i>London to Jamaica, Barbadoes, Antegoa, Montserrat, Nevis and St. Christophers, and the contrary</i> — — — — —	1	6	3	0	4
From <i>London to New York; and the contrary</i> — — — — —	1	0	2	0	3
From any part of the <i>West Indies to New York</i> — — — — —	0	4	0	8	1
From <i>New York to any place within 60 English Miles thereof; and the contrary</i> — — — — —	0	4	0	8	1
From <i>New York to Perth-Amboy (the Chief Town in East New Jersey, and to Bridlington in West New Jersey; and the contrary: And from New York to any place (not exceeding 100 English Miles); and the contrary</i> — — — — —	0	6	1	0	1
From <i>Perth-Amboy and Bridlington to any place not exceeding 60 English Miles; and the contrary</i> — — — — —	0	4	0	8	1
From <i>those places, and the contrary, not exceeding 100 English Miles</i> — — — — —	0	6	1	0	1
From <i>New York to New London, (the chief Town in Connecticut in New England) and to Philadelphia, the chief Town in Philadelphia; and the contrary</i> — — — — —	0	9	1	6	2
From <i>New London and Philadelphia to any place not exceeding 60 English Miles; and back again</i> — — — — —	0	4	0	8	1
From <i>those Towns not exceeding 100 Miles; and back again</i> — — — — —	0	6	1	0	1

From

Rates of Post Letters.

	English Money.			
	Single.	Double.	Treble.	Ounces.
	s.	d.	s.	d.
From <i>New York</i> to <i>Newport</i> , the chief Town in <i>Rhode-Island</i> and <i>Providence-Plantation</i> in <i>New England</i> : And to <i>Boston</i> the chief Town in <i>Massachusetts Bay</i> in <i>New England</i> : And to <i>Portsmouth</i> the chief Town in <i>New-Hampshire</i> in <i>New-England</i> : And to <i>Annapolis</i> the chief Town in <i>Maryland</i> ; and from each of those places to <i>New York</i> _____	1	0	2	0
From <i>Newport</i> , <i>Boston</i> , <i>Portsmouth</i> and <i>Annapolis</i> aforesaid, to any place not exceeding 60 English Miles; and back _____	0	4	0	8
And from those Towns, not exceeding 100 English Miles, and thence back _____	0	6	1	0
From <i>New York</i> to the chief Offices in <i>Salem</i> and <i>Ipswich</i> , and in <i>Piscataway</i> , and to <i>Williamsburgh</i> in <i>Virginia</i> , and those places to <i>New York</i> .	1	3	2	6
From the chief Offices in <i>Salem</i> , <i>Ipswich</i> , <i>Piscataway</i> and <i>Williamsburgh</i> aforesaid, to any place not exceeding 60 English Miles; and the contrary _____	0	4	0	8
And from those Towns, not exceeding 100 English Miles, and the contrary _____	0	6	1	0
From <i>New York</i> to <i>Charles-Town</i> , the chief Town in <i>Carolina</i> ; and the contrary _____	1	6	3	0
From <i>Charles-Town</i> aforesaid to any place not exceeding 60 English Miles; and the contrary _____	0	4	0	8
And all Letters and Packets from <i>Charles-Town</i> aforesaid to any place not exceeding 100 English Miles, and thence back again _____	0	6	1	0

And

Rates of Post Letters.

And all Letters, and Packets of Letters directed to or from on board any Ship in any Port within her Majesty's Dominions, shall pay one Penny over and above the Rates Chargeable by this Act.

Penny-Post Letters, within the Bills of Mortality, and 10 Miles round from the *General Letter Office* in *London*, pay as before this Act was made.

Note, That by a Proviso in the abovesaid Act, all Merchants Accounts not exceeding one Sheet of Paper, and all Bills of Exchange, and Invoices, and Bills of Lading are allowed without Rate. And also all Covers of Letters not exceeding a Quarter of a Sheet of Paper, sent by the Way of *Vienna*, *Marseilles*, *Venice* or *Leghorn*, to be sent to or from *Turky*, shall pass without Rate.

No Packet to be carried out of *Great Britain* in Foreign Ships:

The Post to pay nothing for passing Ferries in *North America*.

Inland Letters to pay where delivered. And the Two Universities to pay as before the making of this Act.

All Letters on board any Ships that may touch in any Port, shall, under the Penalty of Five Pounds for every Offence, be delivered to the Deputy Post-Master of such place, who shall pay to the Person delivering the same, a Penny a Letter.

Carriers, Coaches, and Watermen, are not to carry Letters; unless they concern the Goods carried by their Carrs, Waggon, or Pack-Horses at the same time.

The Days of sending Letters to Foreign Parts, are,
Monday] To *France*, *Italy*, *Spain*, *Flanders*, *Germany*, *Sweden* and *Denmark*.

Tuesday] To *Holland*, *Flanders*, *Sweden*, *Denmark*, *Germany*, and all parts of *England*, *Wales*, *Scotland* and *Ireland*.

Thursday] To *France*, *Spain*, *Italy*, and all parts of *England* and *Scotland*.

Friday] To the *Netherlands*, *Germany*, *Sweden*, *Denmark*.

Saturday] To all parts of *England*, *Scotland* and *Ireland*.

To *Portugal* once a Fortnight; and to the *West Indies* the last *Thursday* in every Month.

The Day Foreign Mails are due at *London*.

Tuesday and *Friday*] From *Holland* and *France*.

Monday and *Thursday*] From *Flanders*.

Monday, *Wednesday* and *Friday*] From *Ireland*.

Once a Week from *Portugal*, *Spain*, &c.

C H A P. XIV.

A DICTIONARY, or Alphabetical Explanation, of the most difficult Terms commonly used in Merchandize and Trade; and shews the Value of Coins, Weights, Measures, &c.

A *Bashee.*] Sixteen Pence Sterling in *Persia*.

Account of Saks.] An Account wherein the Sale of Goods is expressed.

Agai.] The Difference in *Holland* or *Venice*, of the Value of currant Money and Bank-Notes, which in *Holland* is often 3 or 4 per Cent. in favour of the Notes.

Allotting of Goods.] Is when a Ship's Cargo is divided into several Parts, which are to be bought by divers Persons whose Names are wrote on as many pieces of Paper, which are applied by an indifferent Person to the several Lots or Parcels; and by this means the Goods are divided without Partiality, for every Man has the Parcel of Goods, that the Lot with his Name on is appropriated to. *Vid. Inch of Candle.*

Alquier.] A Corn Measure at *Lisbon*, 1 Peck, 3 Quarts, and 1 Pint.

Alchem.] *Muscovy* Money, 3

Capecks, or 3 $\frac{1}{2}$ Pence Sterling. vide *Capeck*.

Ana] An *East India* Coin, 4 Pyce, or 1 $\frac{1}{12}$ d. Sterling. See *Rupoe*.

Anchor] Of Brandy, &c. in *Holland*; 10 *English* Wine Gallons.

Apparel] (of a Ship) the Sails.

Arbitration.] Is when two Traders, &c. cannot agree about the Terms of some Contract, they each choose a Man to make an End of the Difference; and if these two cannot agree, the Matter is usually refer'd to a third Person called an Umpire, to whose Decision both sides are obliged to acquiesce. *Vide Stat. 9, 10. W. 3.*

Archelin.] A Corn Measure at *Rotterdam*, being 3 Pecks, 5 Quarts, and near 1 Pint.

Arrear.] Behind-hand or owing.

Asir.] A Gold Coin at *Ormus* in the *Persian* Gulph, about 6s. 8d. Sterling.

Asper. B

Asper.] A *Turkish* Coin of three Farthings in Value, or 80 is 1 Lyon Dollar.

Assignee] One to whom a thing is lawfully assigned or made over.

Average.] Is 1st. The general Allowance made to a Master of a Ship of 1 *d.* or 2 *d.* in every Shilling Freight (as mentioned in the Bill of Lading.) Or 2. An Allowance to him upon special Occasions, when he sustains Damage, which is equally divided upon all his Freight, and paid by each Merchant according to his Cargo. Or, 3. The Contribution that several Insurers pay to make good the Loss of Goods cast over-board, which are by them insured.

Auln.] *Vid.* Exchange of Coin of the Par of Exchange.

Aume.] (of Rhenish Wine) is forty two Gallons, or a Terrian of a Pipe.

B

Bagg.] An uncertain Quantity, as of

Almonds about 3 C.

Anniseeds—3 to 4 C.

Pepper—1 $\frac{1}{2}$ to 3 C.

Goats-Hair—2 to 4 C.

Cotton-yarn 2 $\frac{1}{2}$ to 4 $\frac{1}{2}$ C. &c.

Babar.] At *Moca* in the *East Indies* 386 lb Averdupois; it contains 15 Fracelloes, each 24 Rotelloes, 14 Ounces of 10 Drams each Ounce. But at the

Molucca's, the great *Babar* is 6250 lb and the less 625 lb. Averdupois, by which Spice is sold.

Bale.] A Pack of Merchandize, but is of different Quantity, as of

Cotton-Yarn 3 to 4 C.

Raw-Silk — 1 to 4 C.

Lockram or Dowlas, 3, 3 $\frac{1}{2}$, or 4 Pieces.

Ballance an Account.] To make the Debtor and Creditor sides alike in the Sums. See Chap. 10. §. 10.

Bamboe.] A sort of Cane; also an *East India* Measure, 5 Pints *English*.

Bancah.] A Weight in *East-India*, 16 $\frac{2}{3}$ Drams Averdupois. *Vide* Caty.

Bankrupts.] (See Letter C)

Baratry.] (of the Master of a Ship, &c. Is his cheating the Owners or Insurers, either by running away with their Ship, or imbezeling their Goods, &c.

Barter.] (or Commutation) To Truck or Change one Commodity for another.

Basket.] An uncertain Quantity, as of

Medlers 2 Bushels.

Affaxetida 20 to 50 lb Weight.

Batch.] Four Cruetzers in *Germany*, or 2 Pence 2 Farthings $\frac{1}{2}$ Sterling.

Batman.] *Vide* Exchange of Coin.

Batrel.]

Batzé.] A Piece of German Coin wanting only $\frac{1}{8}$ of a Penny of being three Pence Sterling.

Becovett.] (or Berquet) 10 Pood in *Russia*, or $373\frac{1}{2}$ lb A-verdupois; by which Weight Hemp and other gross Goods are weigh'd.

Besse.] A Copper Coin at *Ormus* in the *Persian* Gulph, 4 Cosbeg (1 d. $2\frac{1}{2}$ gr. Sterling.)

Bill of Debt.] See Chap. 15.

Bill of Entry.] Is an Account of the Goods entered at the Custom-house, both Inward and Outward, in which is expressed the Merchant Exporting or Importing: The Quantity of Goods and Sorts, and whither Transported, or from whence.

Bill of Exchange.] Is a short Writing, ordering the Payment of a Sum of Money in one place, to any Person assigned by the Remitter, in Consideration of the like Value paid the Drawer in another place.

Bill of Lading.] An Instrument signed by the Master of a Ship, acknowledging the receipt of the Merchant's Goods, and obliging himself to deliver the same in good Condition, at the place to which they are consigned; of which there are usually 3. A 1st is given to the Merchant to keep; a 2d

sent to the Factor to whom the Goods are consigned; and a 3d is kept by the Master of the Ship. *Vide* Chap. 15.

Bills of Parcels.] An Account of the particular Sorts and Prizes of Goods bought, given by the Seller to the Buyer.

Bill of Sale.] See Chap. 15.

Billions.] Bimillions, or Bimillions, or twice Millions, or (in Numeration) it is Millions of Millions; shewing that the Word Million is twice mentioned. Some call it Dillions.

Bind.] (of Eels) 10 Strike, each 25 Eels.

Bitt.] Of like Value with the Rial, but currant at *Barbadoes* for $7\frac{1}{2}$ d. Sterling.

Boisfeu.] Of Corn at *Bourdeaux* in *France*, 2 Bushel and near $\frac{1}{2}$ a Peck; but at *Rochell* $2\frac{1}{2}$ Pecks *English* Measure.

Book of Rates.] Is a small Book establish'd by Parliament, declaring at what Value Goods that pay Poundage (or $\frac{1}{8}$ part of the Value) shall be reckoned, so that a 20th part of the Sum found in the Book of Rates, is taken for the Duty payable by the Acts of Tunnage and Poundage.

Bottomage or Bottomree.] Borrowing Money on a Ship, and lending Money on Bottomree, is to lend Money to the Master of a Ship, to be paid with Interest at 40 or 50 per Cent.

at the Ship's safe Return, which if the Ship never do, the Lender never has his Money, and therefore is it the Interest usually so great.

Box.] An uncertain Quantity, as of Quicksilver 1 to 2 C. Prunelloes 14 lb.

Rings for Keys, 2 Gros, &c.

Brace.] *Vide* Exchange of Coin, Ar. 4. of Sect 4. of Ch. 9.

Brait] (Diamonds) Rough Diamond.

Break Bulk] Take out part of the Ship's Lading or Cargo.

Brokage.] (or Brokerage) The Wages or Provision given to them. *Vid.* Ch. 11. Sect. 2.

Brokers.] Buyers and Sellers of Goods for others, &c. *vide* 3 sorts thereof, Chap. 11. in the 2d Sect.

Bundle.] Of Bass Ropes }
Harnes Plates } 10
Glovers Knives }

Hamburg Yarn, 20 Skeans.

Basket-Rods, 3 Foot about at the Band.

Bulrushes $\frac{1}{20}$ of a Load.

Burden.] (of Gadsteal) 180 lb.

Burse.] an Exchange or Place of meeting for Merchants to discourse of their Trade.

Butlerage.] A small duty paid for Wine imported by Unfreemen.

Butt.] Of Sack 2 Hogheads.

Currants—15 to 22 C.

C.

Code.] Of Red-herrings 500

Sprats—1000.

Cagg or Kegg.] (of Sturgeon) 4 or 5 Gallons.

Candil] An *East India* Weight, at *Surat* 540 lb, and at *Alexandria* 538 lb 2 $\frac{3}{4}$ *Averdupois*.

Cane.] A Measure in *Spain* in Length 1 Yard Quarter and Half; but at *Marselis* 2 Yards and $\frac{1}{2}$ a Quarter *English*.

Canister.] of Tea, 75 to 1 C. Weight.

Carantar.] at *Tunis* and *Tripoly*, about 114 lb. at *Acra* in *Turky* 603; at *Aleppo* 100 lb.

Castaro.] Of Wine at *Allicant* and thereabout, 3 Gallons *English* Wine Measure.

Cantone] a Measure in the *Molucca* Islands about 5 $\frac{1}{2}$ Pints *English*, 800 of which make a *Quoian* of Rice.

Capas.] In *Sumatra* in *East-India* about 3 pence Sterling.

Capeck.] *Muscovy* Money, in Value 1 $\frac{1}{2}$ Penny Sterling, or $\frac{1}{10}$ of a *Greven*. See *Roubble*.

Carage.] of Lime 64 Bushels.

Cargo.] Loading of a Ship; it is also a Weight in *Spain*, 12 Roves at *Valencia*, which is 347 $\frac{4}{10}$ lb *Averdupois*; at *Allicant* tis but 280 lb. or 100000 *Aspers* in some Parts of *Turky* is a Cargo, as is 300 Weight at *Marselis*.

Carotcel.] of Cloves 4 to 5 C. Weight.

Currans 5 to 9 C.

Mace about 3 C.

Nutmegs 6 to 7 $\frac{1}{2}$ C. &c.

Cafe.]

Cafe.] Of *Normandy Glass* 120 Foot.

Of *Recorders*, 5 *Recorders*.

Cash.] Vide *Paces*.

Cask.] (An uncertain Quantity as) of *Sugar* 8 to 11 C. Weight.

Almonds about 3 C.

Catty.] A Weight in some Parts of *East-India* 2 *Bancal* or 1 lb. 5 3 and 2 *Drams English* But the Money called a *Catty* in the Island *Sumatra*, is 8 Tale or 6l. 8 s. Sterling.

Charter Party.] An Instrument or Writing drawn between a Merchant and a Master of a Ship, containing the several Articles or Particulars of their Agreement. Vide *Chap.* 15th. the Form of one.

Chest.] (an uncertain Quantity) as of *Sugar* 10 to 15 C. Weight.

Glass 2 to 3000 Foot.

Castle Soap 2½ to 3 C. Weight.

Indigo 1½ to 2 C. 5 Score to the C. &c.

Cheviſſance.] Composition between Debtor and Creditor.

Chique.] Vide *Exchange* of Coin.

Christiana.] in some Parts of *Sweden*, is about 16 d. Sterling

Cliping.] Coin in *Sweden*, value 11½ d. Sterling; it is half their Mark.

Cloſſel.] Vide *Tare*.

Close an Account.] To close an

Account, is to make an end or shut up an Account, when you intend to write no more there-to, and is done by Ballancing and drawing a Line, &c.

Clough.] (or Draught) An Allowance of 2 Pound at every 3 C. Weight for the turn of the Scale, that so the Commodity may hold out when retail'd.

Coard.] Of Wood, 4 Foot long, 4 Foot broad, 8 Foot deep.

Coban.] Gold Coin in *Japan* worth about 30 Shill. Sterling.

Coca.] a Measure in *Japan* about an *English Ale Pint*.

Cockett.] A Custom Warrant wrote on a small Sheet of Parchment, with the Seal of the Custom-house, given to a Merchant upon Entry of his Goods, certifying that the same are Customed.

Colour Strangers Goods.] Is when a Freeman or Denizen, permits a Foreigner to enter Goods at the Custom-house in his Name, whereby the Foreigner, who in many Cases should pay double Duty, by being entered in the Name of a Freeman, pays but single Duty, against which there are many severe Laws.

Collibar.] A Money changer.

Commission of Bankrupt.] A Commission under the great Seal of *England*, directed

to five or more Commissioners, to enquire into the Particulars of a Man's Circumstances that is failed or broke (as we call it). These Commissioners are to act according to certain Statutes made in that behalf; as 34 and 35 Hen. 8. c. 4. 13. Eliz. c. 7. 1. Jac. 1. c. 15. 21. Jac. 1. c. 19. 14. Car. 2. c. 24 &c. for Relief of Creditors.

Who may be Bankrupts.

All Persons (by the Statutes above) using Trade by way of Bargain, Exchange, Barter, Chevissauce, or otherwise in Gross or Retail, or seeking Trade, of living by buying or selling, Subject or Denizen, Scrivner, &c. that obtains Protection, unless by Parliament, that exhibited Bill against Creditor to take less than due, or to procure longer time of Payment than was given at the time of the original Contracts; or being indebted 100 l. or more, shall not pay or compound for the same within 6 Months after due, and the Debtor be arrested for the same; or within 6 Months after an Original Writ sued out to recover the said Debt, and Notice thereof given to him, or left in Writing at his Dwelling-house or last place of abode; or being arrested for Debt, shall after his Arrest lie in Prison two Months or more

upon that or any other Arrest or Detention in Prison for Debt. Or being arrested for 100 l. or more of just Debt, shall at any time after such Arrest escape out of Prison, or procure his Enlargement by putting in common or hired Bail, shall be accounted and adjudged a Bankrupt; except, as by Stat. 14. Car. 2. c. 24. such as have Stock in the East India, or Royal Fishery, or Guinea Companies, who shall not be esteemed Merchant or Trader.

Commissioners how so act.

Commissioners in the Commission of Bankrupt may by the Majority within 6 Months convey all Lands, &c. to the use of the Creditors, unless Remainder be in the King by his Gift; and that they may sell what the Bankrupt possesseth as Owner, tho' sold before, &c.

Commissioners (as aforesaid) may Authorize to break open House, Shop, Trunk, &c. and seize.

Commissioners (as above) may examine Offenders on Interrogatories, and also the Wife of the Bankrupt.

Commissioners may assign Debts due, or to be due, and properly alter, as if made to them.

Commissioners (as aforesaid) may examine the Bankrupt on Oath,

Oath, and on notice thrice at his House to be declared a Bankrupt, and on 5 Proclamations not appearing, to be apprehended.

Commissioners may proceed to Execution on Death, after Commission and before Distribution.

Commissioners being sued may plead the General Issue, and give this Statute in Evidence.

Commissioners may commit such as refuse to answer fully.

Commissioners to allow Charges to Witnessess sent for.

Commissioners to declare (on request) the bestowing of Bankrupt's Money, &c.

Commissioners to see that Creditors be relieved *pro Rata*, without regard to greater or lesser Security.

Commissions of Bankrupt to be sued forth within 5 Years after being a Bankrupt, and any Creditor, within 4 Months after the Commission, and until Distribution, may partake paying share of Charges.

Commission to a Factor] *Vide* Chap. II. Sect. 2.

Commerce.] Trade of buying and selling.

Commutation.] *Vide* Barter.

Company.] (of Merchants) are either, 1. Companies in Joint-Stocks, as the *Marea* Company, *East-India* Company, and *Green-*

land Company; or, 2. Regulated Companies, as the *Hamborough*, *Turky*, *Eastland* and *Muscovy* Companies.

Composition.] By Composition in the way of Trade is meant, when a Debtor cannot pay his whole Debt, he agrees with the Person to whom he oweth the Money, to take part in lieu of the whole Debt, for which part he obtaineth a Receipt in full, as for the whole Debt; and this Money is said to be paid by Composition.

Cono.] (or Cogno) Wine Measure at *Florence*, being 10 Barrels of 117 $\frac{1}{2}$ Gallons per Barrel.

Consign Goods.] Is to present deliver, or assign over; especially Goods are said to be consigned to a Factor, when they are sent him by his Employer to be sold, &c. or when a Factor sendeth Goods to his Employer, the Goods are said to be consigned to that Employer.

Contraband Goods.] Are such as are prohibited Importation, as Buttons, Thrown-Silk, Sword-Blades, &c.

Capes-Mate.] A Partner in Merchandizing.

Copstake.] At *Bremen* in *Germany* about 12 $\frac{1}{2}$ d. Sterling.

Cordage.] The Tackle of a Ship.

Correspondent.] When two Men hold a mutual Familiarity or Commerce by Letters, Invoyses, &c. they are Correspondents.

Cosbeg.] Money in Persia $\frac{1}{4}$ of a Bels.

Covado.] a Measure for Cloth in the Persian Gulf, the long one about 38 Inches, but the short one there and at Lisbon in Portugal, is equal to the Pico at Aleppo, or 27 Inches, as is the short Cavado at Surat, by which they measure Silks and Callicoës; but the Cavado there is 35 Inches, used in measuring Woollen Cloth.

Coudry.] $\frac{1}{16}$ of a Mafs in Japan.

Counterpoize.] To weigh one against another.

Cracbe.] A small piece of Money at Florence and Leghorn in Italy 3 Farthings Sterling, or the Eighth of a Julio, or 5 Quadrins.

Cranage.] Money paid for the Use of a Crane, by which bulky Goods are drawn up to Shore, out of the Ship, Hoy, &c.

Creditor.] One that gives Credit, or lendeth to another.

Creek.] or Gulf. A crooked Shoar, where two Corners of Land extend themselves into the Sea at some small distance, between which a Vessel may sail.

Crown.] curreant; &c. see Exchange.

Crusado.] In Germany, 6 s. 2 d. 1 $\frac{1}{2}$ gr. in Portugal 2 s. 10 d. and in Ireland 2 s. 8 d. Sterling.

Crusser.] A small Piece of German Coin, 60 whereof make a Florin, so its Value is 2 $\frac{2}{3}$ Farthings Sterling.

Custom.] Is a Duty paid for Goods exported by the Subject, to Kings or Princes for protecting them in their Trade from Enemies, &c.

Cubit.] 18 Inches.

Cruzers.] Ships that sail upon the Ocean, with design to fight and take Enemies Ships.

D

Debenture.] They are owing; or an Arrear; or (as most commonly understood in Trade) is a Writing certifying Money to be due from the King, &c. to any one for Custom; or payable for foreign Goods exported by Certificate.

The Form of a Debenture may be seen in my *Comes Commercii*, Chap. 4.

Debtor.] One that is indebted to another.

Demurrage.] An Allowance to the Master of a Ship by the Merchants, for staying in a Port longer than the time prefix'd for his Departure. *Vide* Freight of Ships, Chap. 11.

Denier.] In France $\frac{1}{12}$ of a Farthing, and in Germany $\frac{1}{4}$ gr.

Diary.]

Diary.] (or *Journal*) a Day-book, or an Account of every Days proceedings in Trade.

Dicker.] (Of Leather or Knives) 10; of Necklaces 10 Bundles; each Bundle 10 Necklaces.

Discount.] Set off, deduct or abate in consideration of prompt payment, which is usually what the Interest comes to; as if I owe 100 *l.* and by contract am to pay at the end of 6 Months, if I pay the same presently, I am to have a Sum allowed me which bears such Proportion to the Sum given, as the Rate does to the Principal and *Rata*, if the Discount be for a Year, and in proportion to the time, if for less than a Year.—See my Index to Interest, page 95. See Rebate.

Disembarque.] Take Goods to Land out of a Ship or Vessel.

Distrain.] Take away Goods for the payment of a Debt.

Ditto.] The same, or the said.

Dividend.] (or *Divident.*) In Arithmetick, the Number to be divided: But of Company to make a Dividend, is to assign how much of the Profits gained by a Company's Trading, is proportioned or justly due to each Share contained in the whole Joint-stock; so that each Member, by know-

ing how many Shares he has therein, may know what he is to receive of the whole Gain.

Dock.] A Place where Ships are built, refitted, or laid up, &c.

Doight.] The 4th Part of a Stiver in *Holland.*

Dollar.] See Sect. 4 of Chap. 9. for the 4 *Spanish* ones or Pieces of Eight. The *Rix Dollar* at *Hamburg* about 4 *s.* 6 *d.* the *Imperial* and *Philip Dollars* about 4 *s.* 9 $\frac{1}{2}$ *d.* That at *Brunswick* is 4 *s.* 3 *d.* 0 $\frac{1}{4}$ *gr.* And that at *Copenhagen* 48 *Stivers* or 4 *s.* 9 $\frac{1}{2}$ *d.* The *Lyon Dollar* is 5 *Shillings Sterling.*

Dovane.] The Custom-house at *Lyons.*

Dram.] A Weight for fine Goods in the *Persian Gulf* about *Ormus*, 6 whereof make an Ounce *Averdupois*, 8 *English* Drams in an Ounce *Troy*, and 16 the Ounce *Averdupois.*

Drapery.] Cloath-market, or that resembling the Cloathing of a Picture.

Draught.] (of a Ship) the Number of Feet under Water when Laden; also an Allowance in Weighing. *Vid.* Clough.

Drugs.] Simples (of which the most part are dry) some whereof are medicinal, as *Jesuits Bark*, *Gallinagal*, *Allom*, *Rubarb*, *Cream of Tartar*, &c. Others are Grocery Drugs, as *Coffee*, *Tea*, *Tamerins*, *Aniseeds*,

nifeeds; Cocoa Nuts, Ginger, &c. almost innumerable.

Dina.] An *East-India* Coin about 30 Shillings Sterling.

Ducat] The *Hungarian* or *Pollander* about 4 s. 8 d. That of *Rome* (called the Gold Crown) 5 s. 6 d. and for those of *Venice*. See Sect. 2. Chap. 9.

Ducatoon.] See Sect. 4. Ch. 9.

Duty or *Additional Duty.*] Money paid for Custom of Goods, &c. to be applyed to the King's Use, as that of Tunnage, Poundage, &c. whether the same is Exported or Imported.

E

Effects.] Merchant's Goods or Concerns.

Ell.] Long Measure in several Countries; see Sect. 4. of Chap. 9.

Embargo.] Is said to be laid on Shipping, when, by Order of the Government, none may go out of any Port of a Nation; and sometimes that none may either come in nor go out.

Empory.] An Exchange.

Enchiridion.] a Pocket-Book or *Vade mecum*.

Endorse.] To write on the backside of any Instrument or Writing, something relating to the Matter within; as to

Endorse] (a Note) is to write on the backside what part thereof is paid, also when and

by whom, as used by Bankers, &c.

Endorse.] (a Bill of Exchange) To order another to Receive the Content of a Bill that is payable to me, or my Order, which is done by writing my Name on the Backside; as if *A* draws a Bill of 100*l* payable to *B*. or Order, which is accepted upon Presentation; but before the Bill is payable, *B* has Occasion to pay 100*l* to *D*, so he writes his Name on the Back, and delivers to (*D*) the Bill; and *D* having occasion to pay to *E* 100*l*. writes his Name on the Backside, and delivers the Bill to *E*, &c. So all they that have wrote their Names on the Backside are Endorsers; and he that has the Bill last, if the Acceptor will not pay it, may prosecute both all the Endorsers; and the Drawer and Acceptor, or any of them by the Custom of Merchants.

Enfranchise.] Encorporate into a Body or Society, as all our Corporations are.

Enhance.] To raise the Price of any thing.

Epba.] A Jewish Measure of four Gallons and half.

Escambia.] A License to make over a Bill of Exchange to one beyond Sea.

Enactiō.] Taking unlawful Fees or Reward.

Exchangers.

Exchangers.] Men that re-
turn Money beyond Sea.

Exchange Brokers.] Men that
tell how the Exchange goes,
and find those that will Ex-
change. *Vide* Factors, Chap.
II. §. 2.

Export.] To send any thing
out of a Port to Sea, as Goods
in a Ship, &c.

Extortion.] Taking more from
another for Usury, &c. than
is justly or legally due.

F

Factor.] A Merchant's A-
gent, &c. *Vide* Chap. II. §. 2.

Factorage.] The Wages that
a Factor has. *Vide* Chap. II.

Faggot.] (of Steel) 120 lb
Weight.

Fangot.] An uncertain Quan-
tity, as of Raw Silk, 1 to 2½ C.
Groom and Mohair Yarn 1½
C. to 2½ C.

Fanam.] A Piece of Coin at
Messapatan in *India*, value 6 d
1½ gr. 15 of which make a Pa-
god of Gold.

Fat.] An uncertain quantity,
as of Yarn 210 to 221 Bundles;
Unbound Books ½ a Maund;
Wire 20 C. to 25 C. Weight;
Isinglass ¾ C. to 4 C. Weight.

Florin.] In *Germany* 3s. 4d.
in *Sicily* 2 s. 6 d. in *Spain* 4 s.
4½ d. in *Holland* and *Poland* 2 s.
and in *Savoy* ¾ pence Sterling,
of Gold 5 s. Accounts are kept

in some Parts of *Germany* in
Florins, Batches and Crusars,
and in others in Florins, Souls
and Deniers, Values of which
are found under their respec-
tive Denominations.

Fodder.] of Lead, 19½ C.

Folio.] A Leaf, or 2 Pages of
the Ledger, &c.

Fond or Fund.] A Foundation
or Stock in Money, or Money-
worth.

Foot.] Of *Amsterdam* and
Antwerp 11½, *Paris* 12½, *Bream*
11½, *Frankfort* and *Cologne* 11½,
Spain 12, *Rome* 11½, *Venice* 13½,
Dantzick 11½, *Copenhagen* Foot
is 11½ Inches *English*.

Forefall.] To Buy Goods be-
fore they come to Market;
with Intent to advance their
Price.

Foundered.] A Ship is so
when it is filled with Water by
a Storm.

Freight.] or *Freight*, is the
Merchandize a Ship carries;
and sometimes the Money paid
for such Carriage is called
Freight.

Fraile.] Of Raisins about 75
Pounds.

Franchise.] Freedom or Pri-
vilege.

Friff.] To sell Goods at time,
or upon trust.

G

Gabaridge.] That which *Irish*
Goods are wrapped in.

H h

Gabell.]

Gabell.] Tribute or Custom paid to Princes.

Gaffe.] An Iron Hook to pull great Fishes into a Ship.

Gaga.] A Measure in *Japan* containing 100 Gantas, each Ganta being three Ale Pints is $3\frac{7}{8}$ Ale Gallons, by which Rice and other Grain are Measured.

Gallon.] (*Irish*) 224 solid Inches for Wine or Brandy, *English* 231, and of Ale 282, *Guernsey* 252 Inches.

Garble.] The Dust and Dross that is severed from Spices, &c.

Garbling.] Picking the worst from the best of any Commodity.

Gare.] Very coarse Wool.

Gasce.] Money of *Zant* (a Curran Island in the *Mediterranean*) in Value $2\frac{7}{8}$ Farthings, 80 of which make a Dollar or 4s. 6d.

Goad.] An Ell *English*, by which *Wesst* Friez is measur'd.

Groven.] A Coin in *Muscovy* 12d. Sterling, 10 makes their Rubble.

Gros.] Small Money in *Poland*, Value $3\frac{7}{8}$ Farthings, 30 whereof makes their Guilder, or 2s. Sterling; also a Gros of any thing is 12 Dozen.

Gross Weight.] the Weight of the Goods or Merchandize, Dust and Dross mixt therewith; and of the Bag, Chest-

Frail, or other thing in which they are contained, out of which Gross Weight Allowance is made for Tare and Trett.

Guild.] A Company combined with leave of their Prince.

Guild-Mercant.] A Privilege whereby Merchants may hold Pleas of Land within themselves.

Guilder.] The common Silver one in *Germany* is = 3s. 8d. $\frac{7}{8}$. that of *Holland* or *Poland* 2s. that of *Nuremburgh* 7s. 1d. the Golden one in some parts of *Germany* is 4s. 9d. $\frac{1}{4}$ gr. *Sterl.* of *Portugal* 5s. Accounts are kept in *Holland* in Guilders and Stivers, and in *Flanders* in Pounds, Shillings and Pence of Gros.

H

Hair's Breadth.] Is accounted among the *Jews* the 48th part of an Inch.

Hallage.] Toll or Duty paid for any Commodity brought to be vended in a Hall.

Hand.] (In the height of a Horse) four Inches.

Hand's-Breadth.] three Inches.

Hanega.] A Corn Measure at *Bilboa* in *Spain* $1\frac{3}{4}$ Bushel *English*; so that five *Hanega's* make a Quarter or eight Bushels *English*.

Hanock.]

Hanock] A Corn Measure at *Malaga* in *Spain*, containing (unheaped) lb 29, or heaped 144 lb *Averdupois*.

Harping Irons.] Iron Instruments to strike Whales and other great Fishes withal.

Harpiniers.] those that strike Fish with the Harping-Iron.

Hin.] *Jewish* Measure of about three Quarts.

Hoghead.] 63 Gallons, *Vide* Chap. 1.

I.

Jarr.] (of Oyl, Olives) 18 to 26 Gall. Green Ginger about 100 pounds Weight.

Immunity.] Privilege or Freedom.

Importunes] without Port or Haven.

Import Goods.] to bring them into a Port.

Impost.] (of Goods) the Tax or Custom paid for Merchandize Imported.

Inch of Candle.] Goods are sold by Inch of Candle, when a Merchant or Company of Merchants (as the *East-India* Company, &c.) having a Cargo of Foreign Goods arrived, are minded to make a speedy Sale thereof. In this Case Notice is usually given upon the Exchange by Writing, and elsewhere, when the Sale thereof begins; against which

time the Goods are divided in to several Parcels called Lots, and Papers Printed of the Quantity of each and of the Conditions of Sale, as that none shall bid less than a certain Sum, more than another has bid before, &c. during which time of bidding, a small Piece (about an Inch) of Wax-Candle is burning, and the last bidder when the Candle goes out has the Lot or Parcel exposed to Sale. And if any Difference arise, as it often happens in a good Lot, that 4 or 5 more bid together, in this Case the Lot is put up again till the true Buyer can be discovered in the Judgment of *Standers-By*, appointed for that purpose, which Buyer is bound to stand to the Bargain and to take the Lot, whether good or bad, at the Rate he bought it, by being the last Bidder.

Indorse.] *Vide* *Endorse*.

Ingenio.] The Sugar-House at *Barbadoes*.

Ingot.] (of Silver or Gold) an uncertain Quantity of Bullion or melted Gold or Silver.

Inland Bills.] Bills payable in the same Land in which they are drawn.

Inland Town.] One that stands far from a Port, and to which no Vessel can Sail.

Inland Trade.] Trade that is managed wholly in one Country.

Insurer.] (of Ships, Cargo, &c.) One who for a Sum of Money paid in hand to him by a Merchant, obliges himself to make good such Ship, &c. so far as is the Value of that for which he hath received a *Premium*, in Case of Loss by Storm, Pyrates, &c. as mentioned in the Policy. Ch. 15.

Interlopers.] Those that hinder or intercept the Trade of a Company legally established, by the Trading in the same way.

Inventary] A Catalogue, or a particular Estimation of Goods, &c.

Invoice.] An Account of Goods, Custom, Provision, Charges, &c. sent from a Person to his Correspondent.

Invoice-Tare.] The Tare (or Weight of the Cask, Bagg, &c. in which Goods are put) mentioned in the Invoice or Factory.

Journal.] A Book containing a daily Account of any Business, or a Merchant's Journal, is a Transcript of the Waste-book, which in this Book is made Debtor. *Vide* Chap. 9.

Julio.] Money at *Leghorn*, and *Florence* in *Italy*, Six-pence Sterling, or 8 Cratches.

K

Keel.] The lowest Timber, or Bottom of a Ship.

Key.] A Place to Land or Ship off Goods at, the Number of which are settled by the Parliament, or appointed by the King: Those at present belonging to the Port of *London*, are *Galley Key*, *Brewers Key*, *Chesters Key*, *Wool-Dock*, *Custom-House Key*, (except the Stone Stairs on the West Side thereof) *Porters Key*, *Bear Key*, *Sabs Dock* (excluding the Stairs there), *Wiggins Key*, *Youngs Key*, *Ralphs Key*, *Dice Key* (except the Stairs there) *Smarts Key*, *Somers Key*, (except the Stairs there) *Lyon Key*, *Harmonia Key*, *Butolph Wharf*, *Gaunts Key* (except the Stairs on the East Side), *Cocks Key*, and *Fresh Wharf*, besides other Places for landing Fish, Salt, and Provision; as *Billingsgate*, *Bridge-House* in *Southwark*, &c.

Killow.] a Corn Measure in *Turkey* $3\frac{1}{2}$ Pecks *English*, and 5 *Zant* Killows is six *English* Bushels.

Kintalk.] Of Fish 100 lb Weight. *Vide* Exchange of Coin, of the Par of Exchange, Gen. Head 3. *vide* Quintal.

Knitledge.] The Balast of a Ship.

Landard.]

L
Starboard.] Port. The left side of a Ship.

Lastage.] The Ballast of a Ship.

Last.] Of Ashes for Soap, Cod Fish, White Herrings, Meal, Pitch and Tarr. } 12 Barrels.

Of Red Herrings = 20 Cades; Stock-fish = 1000, of Dogstones = 3 pair, Flax or Feathers 17 C. of Gunpowder 24 Barrels (or 2400 pound weight:) Of Leather 20 Dicker, of Hydes = 12 Dozen, of Corn or Rape Seed = 10 Quarters, and of Wool 12 Sacks.

Leakage.] An Allowance to the Merchant (for Liquids) of 12 per Cent. And to Brewers 3 in 23 Barrels of Beer, and 2 in 22 Barrels of Ale.

Leaky.] A Vessel is so, when it lets out any of the Liquor therein contained; or a Ship is so when it lets Water come in.

Ledger.] A Book of Accounts, wherein every Man's Account, and also that of every sort of Goods Bought and Sold by a Merchant are placed each by themselves. See Chap. 10. §. 1. and 6.

Letter of Advice.] A Letter from one Correspondent to another, advising him what Bills he has drawn on him, &c. Vide The Duty of a Factor, Ch. 11.

Letter of Credit.] Is a Letter from one Correspondent to a-

nother, to request his Crediting the Bearer thereof with a certain Sum of Money therein mentioned: In which Letter it is necessary some special Token should be mentioned, the better thereby to secure both sides from Frauds that might be practised in procuring Shamb Letters of Credit. Vide Ch. 16.

Letter of Licence.] A Letter of Licence is an Instrument or Writing granted to a Man that has fail'd or Broke, Sealed and Signed by his Creditors, which Letter does usually give a longer time for payment, so that the Debtor having this Letter of Licence, can go about his Business without fearing an Arrest. See the Form of one, Chap. 15.

Lispound.] a Weight at *Hamburg*, 15 of their Pounds (or $\frac{1}{10}$ of their Kintle) and is 16 lb 4 $\frac{3}{4}$ and 12 Drams *Averdupois*; and at *Copenhagen* in *Denmark* it is one 20th of their Shippound.

Livre.] In *France* 18 d. in *Spain* 5 s. at *Leghorn* and *Florence* 9 d. *Genoa* 16 $\frac{1}{2}$ Sterling; A *Livre* is 20 *Sous* (or *Soldo's* in *Spain*) each *Sous* 12 *Deniers*; in which Denominations Accounts are kept in the most noted Places for Traffickall over *France*, *Spain* and *Italy*.....

Loan.] Interest of Money.

Lombard.] a Bank for Usury, so called from the Inhabitants in *Lombardy* in *Italy*, who are much

much concerned in Usury.

Loop.] of Corn, at *Riga* two Bushels, and in some Places 4 Pecks and $\frac{1}{2}$.

Loot.] a Weight of some Parts of *Germany* and *France*, half their Ounce, or the $\frac{1}{2}$ of a Pound; so the *Loot* (for Example) at *Spire*, is very near 9 Drams *Averdupois*.

Lyon Dollar.] Eighty Aspers or 5 s. Sterling at *Aleppo* in *Turky*, where Accounts are kept in Dollars and Aspers.

M.

Maggio.] of Corn in *Italy* 24 Stars, or 17 $\frac{1}{2}$ Bushels *English* Corn Measure.

Mamooda.] Coin at *Mesopotan* in *East India*, value near our Shilling.

Mamotby.] At *Ormous* in the Gulf of *Persia*, value 8 d. Sterling.

Maneb.] Of Silver is 60 Shekels, or 7 l. 10 s. 00 d; of Gold 100 Shekels, or 75 l. Sterling.

Manifest.] A Manifest is a Transcript of a Master of a Ship's Cargo, shewing what is due to him for Freight from each Person to whom the Goods in his Ship belong.

Manual Goods.] Those whereof present Profit may be made.

Manufacture.] A Commodity produc'd by the Work of the

Hand, as Cloth, Bays, Serge, Hats, &c. but Wool is no Manufacture, because Nature produceth it, but whatsoever Commodities are made by Art, of things naturally produc'd, are properly called Manufactures.

Maritime.] Belonging to the Sea.

Mark.] Money, in *England* 13 s. 4 d. in some Parts of *Germany* 16 Stivers, or 2 s. Sterling; in *Denmark* it is 16 Shillings (where Accounts are kept in Marks and Shillings) or 12 $\frac{1}{2}$ d. Sterling; but in *Sweden* the Mark 22 $\frac{1}{2}$ d. Sterling.

Mark of Goods.] A distinguishing Characteristick, whereby every Merchant and Trader knows his own Goods and the Prices thereof, which is sometimes by other Characters, and particularly the Mark upon the Bales, Chests, Bundles, &c. of Partners is for the most part as in the Bill of Lading, Chap. 15.

Mark Laps.] In some Parts of *Poland* 3 s. 9 $\frac{1}{2}$ d. Sterling.

Marygrofs.] A *German* Coin, Value 1 d. 1 $\frac{1}{2}$ Farth. Sterling.

Mas.] A Silk Weight in *India* $\frac{1}{4}$ of a Pyce; also a Coin in *Japan* 10 Country, or 5 $\frac{1}{2}$ d. Sterling. But in the Island *Sumatra* the *Mas* is 4 Capans, or 1 Shilling Sterling.

Mast.] (of Amber 2 $\frac{1}{2}$ Pound Weight.

Maud.]

Maund.] (of unbound Books is 8 Bates, each 1000 Pound Weight, or 2 Fats.

Maund shaw.] A Weight at *Gamsus* in the Gulf of *Persia* 12½ Pounds *Averdupois*; but the

Maund Tauris.] us'd in weighing Silk there, is but 6½ lb. *Averdupois*; at *Surat* there is one Maund of 33 lb. 5 ¾. 7 Dr. the other of 27 lb. *Averdupois*; and the Maund at *Mesopotam* is but 26 lb 14 ¾ 8 Dr. of our common Weight.

Masse.] Five Hundred Herrings.

Measure.] Of Corn in *Sweden* 3 Bushels, and near a half, the same with a Barrel in *Denmark*. In some parts of *England* it is 1 Bushel.

Medin.] In *Egypt* 3 Aspers (in *Medins* and *Aspers* they keep their Accounts at *Cairo* and *Alexandria*); at *Aleppo* it is 1½ d. Sterling; and of Corn in *Cyprus* it is 2 Bushels *English*.

Messe.] A Piece of Money *East India*, 1500 *Petties*, or 15 d. Sterling.

Mette.] Of Wine in *Turky* 2 Quarts 1½ Pints.

Mettadel.] Of Wine at *Florence* and *Leghorn* 1 Quart and near-half a Pint, 2 whereof make a Flask.

Mihree, by some Milrea.] Of Wine and Oyl in *France* near the *Mediterranean*, 4 Scandals or 17 Gallons *English* Wine

Measure. See Exchange of Coin foregoing.

Missengros.] (or Silver Gros) a *German* Money value 2d. ½ grs.

Mistigal.] A Weight for Silk at *Surat*, 2 Dr. and about ¼.

Moiety.] One Half of any thing.

Monopoly. The buying of any Commodity up, so that none can sell or gain by it but one Person or Partners in Company.

Mortgage.] A Pawn of Lands, Goods, &c. as a Credit or Depositum whereon to borrow Money; which Goods, &c. to be the Lenders, if the Money is not paid back at the time prefixed.

Mout.] (of Plaster of *Paris*) 3000 Pound Weight.

Mulets.] Fines which a Company have Power to lay on Ships or Goods belonging to their Members, to raise Money for the Use of such Company for Maintenance of Consuls, or to make Presents to Foreign Princes, &c.

Murrage.] Toll taken of every laden Cart or Horse, toward the Repair of the Walls of a Town or City.

Muyd.] Of Corn, 24 Minots or 8 Quarters and ½ *English*.

N

Napery.] Linen Cloth or Table Cloth. Na

Naval.] Belonging to the Sea.

Naufrage.] Shipwreck.

Navigable.] Sailable, or which may be sailed in.

Navigator.] One that understands Navigation; or one that Imports Goods in a Foreign Bottom.

Navigation.] The Art of Sailing, as also the manner of Trading by Sea, called Merchandizing.

Naulage.] The Freight or Sum paid for carrying Goods by Sea.

Navy.] A Fleet of Ships.

Neat-Weight.] The Weight of the pure Commodity alone, without the Cask, Bag, &c. And (in Commodities that have any) when the Dust, Dross, &c. is taken out by Garbling, &c.

Negotious.] Full of Business.

Nest.] (of Chests of Coffers)

Notary-Publick.] A kind of Scrivener, who publickly takes Notes of Contracts, Draughts, Protests of Foreign Bills, &c.

Note for Money. A short writing, whereby one Man promifeth to pay another a Sum of Money under his Hand: Vide Chap. 15.

Noteing a Foreign Bill.] A Publick Notary's going to be a Witness, to take Notice that

a Merchant will not accept or pay it.

O

Obligee.] He to whom a Bond is made,

Obligor.] He that enters into Bond.

Oke.] A Turkish Weight: See Turkey Weight in Exchange of Coin; but the Oke of Flesh is $2\frac{1}{4}$ lb.

Okham.] Tow or Flax to drive into the Seams of a Ship.

Omer.] A Jewish Measure of $3\frac{1}{2}$ Pints.

Orcio.] An Oyl Measure, at and about Florence, 8 Gallons and 1 Quart English Wine Measure.

Ork.] A Butt for Figgs or Wine.

Orgal.] The Lees of Wine dried, used by Dyers to make Cloth take Colour.

Orlap.] Any Deck of a Ship but the first.

Overfet.] When the Ship is overturned.

Ouster le Mer.] An excuse for not appearing in Court by being beyond Sea, &c. See 4 Hen. 7.

Owlers.] They that carry Sheeps-wooll or any prohibited Goods in the Night to the Sea-side in order to Ship off contrary to Law.

P

Pace.] Five Foot.
Pack of Wooll.] 17 Stone and a pounds, or 240 lb Weight.
Packer.] He that makes up Barrels of Herrings, &c. See 15. Car. 2.
Pagod.] A Piece of Indian Gold worth about 8s. Sterling, at is 35 Fanams.
Palingman.] A Merchant Denizen born.
Palme.] In some parts of Spain 7 $\frac{1}{2}$ Inches, at Genoa 9 Inches and near $\frac{1}{2}$ English.
Pancart.] A Paper of the Rates and Customs due to the French King.
Par of Exchange.] Vide Exchange of Coin.
Paraw.] A Coin at Constantinople is about 1 $\frac{1}{2}$ Farthing English.
Paration.] Evenness of Accounts.
Passage.] A Writ for the Keepers of a Port to grant Passage over Sea.
Patart.] A Dutch Stiver 5 of which makes 6d Sterling.
Pattacoon.] A Spanish piece of Money in Flanders, about 4s. 3d Sterling.
Payse.] See *Basie*.
Pay.] In Guinea equal to an Alper in Turkey, or 3 Farthings English.
Pawn-Brokers.] They that

lend Money upon any sort of Goods or Commodity.

Pecall.] At Japan, Java, &c. in East India, is 100 Catty, or 132 lb Averdupois.

Pesage.] Custom for Weighing.

Pesterable Wares.] Those that are troublesome and take much room in a Ship.

Petes.] Lead Money in East India, 25 of which makes 3 Farthing English: See Messe and Cash.

Petty Talley.] A Competency of Provision for a Ship.

Piafter.] Something better than a piece of eight Piller.

Picage.] Money paid at Fairs or Marts for breaking the Ground to set up Booths.

Pico.] The long one in Barbary and Aleppo 27 Inches, whereby Woollen Cloth and Silk are measured, that by which Linnen is measured is but 26 Inches, the Egyptian Pico for Cloth is 25 $\frac{1}{2}$ Inches, and that for Silks and Stuffs is 22 $\frac{1}{2}$ Inches English.

Piece of Eight.] 4 sorts: See Par of Exchange. Sect. 4. of Chap. 9. or the Index.

Pocket of Wooll.] Part of a Pack, about half.

Policy of Insurance.] An Instrument or Writing given by Insurors of Ships, Goods, Houses, &c. to Merchants, &c. to oblige themselves to pay the

Sum insured in Case of Loss :

Vide Chap. 15.

Pood] A Weight in *Mascovy* 37lb; 53: 5 dr. of Averdupois, whereby their Rich Furrs and other fine Goods are weigh'd 10 of which make a Bercover.

Poop.] The uppermost part a Stern, a Ship's Hull.

Portegue.] Money of *Hamburg*, in value 2*l.* 12*s.* 9*d.* ½ Sterling.

Portgreve] The Governour of a Port Town.

Port Sale.] A Publick Sale of things to them that bid most.

Post an Account.] Is to put an Account forward from one Book to another, as to Transcribe what is written in the Waste-book, in the Journal, &c. *Vide* Chap. 10. Sect. 8.

Pot or Po] In *Guernsey* and *Jersey* half the Gallon, or 126 cubical or solid Inches.

Poundage.] A Duty granted the King of *England* of 12*d.* for every 20*s.* value of all Goods Exported or Imported, except such as pay Tunnage, and Bullion, and Diamonds, and a few others.

Pre-emption] The first buying of any Thing.

Premium] A Reward, or the Money given for Insuring Ships, Goods, Houses, &c.

Price Current.] A Weekly Account publish'd in *London*, of the Current Value of most

Commodities.

Primage.] A small but customary Allowance to the Master of a Ship for his Sailors, paid at the Lading of a Ship.

Prize Warr, &c.] Such as is taken from Enemies by way of Prize.

Prize Office.] An Office appointed for the Sale of Ships, &c. taken Prize.

Prohibited Goods.] Such Goods as are not to be Exported or Imported.

Prompt payment.] Present Payment.

Protest of a Bill of Exchange] See Chap. 11. Sect. 1. and the Form of one, Chap. 15.

Provision.] The Wages due to a Factor: See Ch. 11. Sect. 2.

Publick Notary.] See Notary Publick.

Punchoon.] Of Wine = 84 Gallons; of Pruons 10 or 12 hundred Weight.

Purse.] Of Money in *Turky*, 500 Dollars or 125*l.* Sterling.

Pyce.] An *East India* Coin being ½ part of a Rupee, or ¼ of an Ana; but in Weight it is 11½ Dracms.

Quadrillions.] Is when the Word Millions is express'd 4 times in Reading a Number, as Millions of Millions of Millions of Millions.

Quadrin]

Quadrin.] Small Money in Italy, $\frac{1}{4}$ of a Crachen is in Value $\frac{1}{4}$ of a Farthing.

Quarter.] Of Corn in Spain, neat 139 pounds Averdupois but in England 8 Bushels.

Quarter Deck.] Over the Steerage as far as the Captain's Cabin.

Quarter Wind.] When all the Sails may draw together.

Quintal or Kintle.] 100 lb in most Places, as of Fish at Newfoundland and in the Straights; but the Kintal at Egborn is but 75 lb Averdupois, at Hamburg there is one of 120 lb, another of 300 of their Pounds, which Pound is $\frac{2}{3}$ of a Pound English; at Bilbao for Iron the Kintle is 158 lb English, and for other Goods 112 lb Averdupois, for the Turkish Kintle. See Sect. 4. Chap. 9.

Quonian.] See Canton.

R

Rack Vintage.] A second Voyage of our Merchants into France for Rack Wines.

Rack Wines.] Wine cleansed and drawn from the Lees.

Ratiam.] Of Corn in some parts of France 4 Bushels $1\frac{1}{2}$ Pecks English; but it is properly no more than a Day's Allowance of Bread or Forrage for Man or Horse.

Ream.] Of Paper, 20 Quires.

Rebate.] An abating what the Interest comes to, in consideration of prompt Payment, and in Strictness Rebate ought to be allow'd for prompt Payment of the Interest, but that is not often regarded. See Discount, and also my Index to Interest, p. 95.

Ree.] A Portugal Coin: See the Table in Exchange.

Reed.] A Jewish Measure, 3 Yards and 3 Inches.

Regrator.] One that buyeth and selleth again in the same Market or within four Miles thereof.

Remanicipate.] To sell or return a Commodity to him that first sold it.

Rialto.] A Marble Bridge at Venice where the Merchants meet.

Rigging.] The Ropes, &c. belonging to the Yard and Masts of a Ship.

Rix Dallar.] See Dollar, In Rix Dollars and Stivers the Danes keep Accounts.

Roll.] (Of Parchment) 60 Skins.

Rome's Crown.] (call'd the Gold Crown) 5 s. 6 d. that at Florence, 5 s. 3 d. that at Sicily, 5 s. 6 d. and for those at Venice. See Sect. 4. Chap. 9.

Rostallo.] A Turkish Weight See Exchange, the Equation of Weight. Chap. 9. Sect. 4.

Rove.] A Weight in *Spain* very near 29 lb *Averdupois* by which they Weigh *Spanish* Wooll at and about *Valentia*, but at *Alicant* the Rove is just 28 lb. There is also a Rove at *Malaga* for Wine Measure, which is 4 Gallons *English*.

Rouble.] Money in *Muscovy* 10 s. Sterling; in Roubles and Pence the *English* there keep their Accounts, and the *Dutch* there keep there Accounts in Roubles, Grevens and Pence, 20 d. to the Greven, and 10 Greven to the Rouble. See *Alti* and *Capeck*.

Rundlett.] An uncertain Quantity of Liquids from 3 to 20 Gallons.

Rupce.] An *East India* Coin worth 2 s. 3 d. Sterling, $\frac{1}{2}$ of which is an Ana, and $\frac{1}{4}$ of an Ana is 1 Pyce, in which Coin Accounts are kept at *Surat* in the *East Indies*, and some parts of the Bay; but in others in Pagods and Fanams.

Ryalk.] A *Spanish* piece of Money about 6 $\frac{1}{2}$ d. Sterling.

S

Sack.] Of Cotton Wooll 1 $\frac{1}{2}$ C. to 4 C. of Sheeps Wooll 26 Stone of 14 lb to the Stone, but in *Scotland* 24 Stone of 16 lb each Stone.

Salmo.] A Corn Measure in *Spain* about 8 $\frac{1}{2}$ Bushels *English*,

but about *Leghorn* it is just 8 Bushels our Quarter.

Salvage.] An Allowance made both by the Statute and Civil Laws to such as save Ships or Goods from Danger of Seas, Enemies, &c. See a late Statute made 4 and 5 *W. M. c. 25*.

Sarplier.] A piece of Canvas to wrap Wares in.

Scale.] (in Trade) that Town where Goods are Landed, in order to be carried to another, is the Scale to that other, and the like of Exchange.

Scandell.] Of Oyle at *Provence*, *Marseilles*, and thereabout in *France*, 4 Gallons and 1 Quart *English*.

Scavage.] A Duty formerly laid on Merchants Strangers Goods Imported or offered to Sale.

Scudi.] In some parts of *Turky* 64 Aspers, or 4 s. Sterling, but at *Leghorn* and *Florence*, in *Italy* the Sudi is 7 $\frac{1}{2}$ Livers, each 9 d. or 5 s. 7 $\frac{1}{2}$ d. Sterling.

Seam.] Of Glas, 24 Stone each 5 Pounds Weight; of Malt 8 Bushels.

Seer.] A Silk Weight at *Surat* 11 $\frac{1}{2}$ Ounces, but at *Messopotam* 10 Pounds *Averdupois*.

Seignorage.] An Allowance to the King or Prince for Gold and Silver brought in the Mals to be Coined.

Seisure.] To make Seisure is to Seise prohibited Goods, &c.

See

Su 14 Car. 2. Ch. 11. Rev. 6. W. M. C. 1.

Semibole.] Half a Tun of Wine or 1 Pipe.

Scraps.] A Turkish Gold Coin about 5 s Sterling.

Seron.] Of Barillia 3 C. Almonds, 2 C. Anniseeds, 3 to 4 C. and Cattle Soap 2 C. to 3 1/4 C.

Seffing.] A piece of German small Money Value 1/4 of a penny Sterling.

Shabes.] At Ormus in the Persian Gulph 4 d. Sterling.

Shepel.] A Corn Measure containing in Holland 3 Pecks; at Lubek 3 1/2 Pecks, and at Hambro 1 Buffel English.

Shippound.] At Antwerp 312 lb but at Copenhagen about 320 lb at Norway, Danzick and Riga it is 293 1/2 lb Averdupois, used for weighing of Flax, Hemp, and other Gross Goods in the Baltick Sea or Eastland Trade.

Shook.] (Of Soap boxes, Canes, Woods, Trays, &c.) 60.

Shilling.] (or Shilling) in the Netherlands 7 1/2 pence in Denmark 1/4 of a Penny Sterling, at Lubek 1 1/2 pence.

Shipper.] A Seaman.

Smuglers.] those that conceal prohibited Goods, against whom there are many severe Statutes; *us 14 Car. 2. Ch. 11. Rev. 6. W. M. C. 1. &c.*

Sombri.] At Malaga in Spain, a Measure for Oyl and Wine, 2 Quarts English.

Sore.] Of Ballances is 4 Dozen.

Sound.] To sound (at Sea) is to make Tryal how many Fathom the Sea is in Depth, which is done by a sounding Line, (which is 20 to 200 Foot long marked at 3, 10 and 15 Foot with Leather, and 5 with white and 7 with red Rags) and a sounding Lead which is about 7 Pound Weight.

Sous.] (Or Soo) in France 3 1/2 farthings, in Germany 2 d. Sterling, 20 Sow is 1 Liver in France, or 1 Florin in Germany respectively.

Span.] 9 Inches.

Spit/gross.] In Germany 2 Mary-gross or 2 d. 1 1/2 farthing Sterl.

Stack.] (Of Wood) 3 Foot long, 3 Foot broad, and 12 Foot high.

Stand.] Of Burgundy Pitch) 2 1/2 C. to 3 C. Weight.

Staple.] A Publick Mart; by 27 Edw. 3. &c. settled and appointed to be kept constantly at York, Lincoln, Newcastle upon Tyne, Norwich, Westminster, Canterbury, Chichester, Winchester, Exeter and Bristol, to which places Merchants and Traders were to carry to sell there.

Staple Goods.] Wooll, Leather, Lead and Wool-fells; tho' now by Staple Goods is generally meant any good vendible Commodity not easily Subject to perish.

Stare.

Staps.] Of Corn about Le-
ghorn 2½ Pecks; but at Venice
2½ Bushels.

Star-board.] The right side
of a Ship.

Statics.] The Science of
Weights and Measures.

Statute Merchant.] (or Statute
Staple) Bonds made and ac-
knowledged as directed by the
Statutes.

Stationate.] Deceit in Mer-
chandize.

Stiver.] See Guilder.

Stoop.] Of Beer in Flanders 2
Quarts ($\frac{1}{4}$ of their Barrel) in
Holland it is 2½ Quarts, at Lu-
beck 7 Pints English, but the
Stoop of Wine in Holland is 3
Quarts ½ Pints English. Mea-
sure.

Storage.] Ware-house Room.

Subbafation.] Selling Confis-
cate Goods under a Spear.

Subscribe.] To underwrite a
ny Instrument or Writing.

Sulana.] A Turkish piece of
Gold, in Value 80 Aspers or
5 s. Sterling; in which Ac-
counts are kept in Tripoly and
Tunis in Barbary; but at Aleppo
it is 8 s. Sterling, or 80 Me-
dins, 100 Aspers is a Sulana
at Moco, the Scale to Mocco the
Metropolis of Arabia.

Supercargo.] One employed
by the Owners of a Ship, or
Merchants, to go a Voyage
to oversee the Cargo, and to
dispose of it out and in to the

best Advantage of the Mer-
chants, for which Service he is
allowed great Commission, be-
cause the Trust reposed in
him is very considerable.

Surcharge.] Charge upon
Charge, or the Charge in any
thing which is over and above
that which is just and right.

Swiss weight.] See Chap. 9.
Sect. 2.

Swelver.] A small piece of
German Coin about a pence
farthing Sterling.

Tackle.] (Of a Ship) The
Ropes, &c.

Tak.] In some parts of East
India 16 Mels (or 20s. Sterling);
at Japan 4 s. 6 d. and in Sumatra
16 s. Sterling.

Tallens.] (In Weight) 62 lb
Troy.

Tally.] A clef piece of
Wood given by the Officers of
the Exchequer to such as pay
Money therinto, upon Loans,
&c.

Tally-Man.] One that sells
all manner of Household Goods,
Linnen, Woollen, &c. to be
paid by so much a Week, in
which method he usually ex-
ports a prodigious advantage
from the Buyer.

Tari.] In Sicily and there-
abouts ½ d. Sterling, where Ac-
counts are kept in Ounces, Ta-

44, and Grains, 20 Grains is 1 Tari, and 30 Tari 1 Ounce, and in some places, Accounts are kept in Florins and Tari, 6 Tari is their Florin.

Tare and Tret. See C. 9. §. 2.

Tarpaulin.] A tarred Canvas laid on the Deck of a Ship to keep the Weather out.

Tassary.] A Measure in Japan, in length 17 Yards English.

Tellers.] Four Officers that receive the Money in the Exchequer.

Tical.] Of Gold in China, in Value 2 l. 16 s. 3 d. Sterling.

Timber.] Of Furs 40 Skins.

Timph.] Money in Poland, about 7 pence Sterling.

Tol.] A Silk Weight at Surat, 2 Pyce (or 12 Mals) equal to 5 Drains 1/2 Averdupois, or 6d. Weight 16 Grains Troy; they have also another Tol whereby their Bezoar Stone, rich Perfumes and Gold and Silver are weigh'd, which is 7 penny Weight and 16 Grains Troy.

Toman.] A piece of Gold at Ormus in the Persian Gulf, in Value 3 l. 6 s. 8 d. Sterling.

Transfer.] A Custom-house Warrant to let pass.

Transport. To carry over Sea.

Trillion.] Or thrice Millions, shewing that the Word Millions is thrice mentioned in Numeration, and is as much as to say Millions of Millions of Millions.

Troisars.] Custom for weighing Wool.

Tubb.] Of Tea about 60 lb; Camphire 56 to 86 lb; Vermilion 3 to 4 C.

Turn.] Of Timber cut to a Square 40 fold Feet.

Tunnage.] Custom granted the King of England for Liquids Imported or Exported: See the 1st granted 43 Edw. 3.

Tydes-men.] Officers attending the Ships until the Customs is paid.

V

Vortule.] Of Corn in Flanders 2 Bushels, 2/3 Pecks English Corn-Measure.

Viltein.] (Fleece of Wool) that which is shorn from a scabbed Sheep.

Vintage.] Grape-gathering.

Ullage.] (Of a Cask, &c.) what the same wants of being full.

Uncustom'd Goods.] Those that have not paid Custom, vide 14 Car. 2. c. 11. Rev. 6. W. M. c. 1.

Ufance.] Is here in England for the most part reckoned a Calendar Month, as from January the 10th to February the 10th; double Ufance two such Months, &c. Vide Chap. 11. Sect. 1.

W

Waga.] A Weight, or 256 lb.
Water-born.

Water-born.] Just a float.

Weigh.] Of Glas = 60 Bunches; of Salt or Corn 40 Bushels.

Werp.] A Corn Measure at *Emden* in the Circle of *Westphalia* $5\frac{1}{2}$ Pecks *English*.

Wharfage.] The Fee paid for Lading or Unlading Goods at a Wharf.

Wool-drivers.] Those that buy Wool of Sheep-masters and carry it on Horseback to Sell.

Wool-winders.] They that are sworn truly to bundle up Fleeces between the Buyer and Seller.

Wreck] The perishing of a Ship, and every Person in it; what part is cast ashore belongs to the King, but if any Creature in the Ship escape, the Goods are still the Owners; if claimed within a 12 Month and a Day.

Y

Yard.] (Of a Ship) The Tim-

ber cross the Mast; at which the Sails hang; and the Main-yard is $\frac{1}{2}$ of the Keels length.

Yard.] (*English Measure*) is *Paris* $\frac{76}{100}$ of an Ell; at *Rotterdam* $1\frac{13}{100}$ Ell; *Copenhagen*, as also at *Stockholm*, *Leipsich*, *Hamburg*, *Norrenburgh*, *Collen*, *Larbeck* and *Dantzick* 1 Ell, and $\frac{1}{10}$; at *Brassels* and *Antwerp* $1\frac{1}{10}$ Ells, at *Madrid* and *Toledo* $1\frac{11}{100}$ Vares, at *Vienna* $1\frac{13}{100}$ Ells for Linnen, and for Cloth and Silks $1\frac{13}{100}$ Ells, *Venice* $1\frac{16}{100}$ Brace, *Rome* $\frac{44}{100}$ of a Cane, *Genoa* $3\frac{1}{2}$ Palms, *Leghorn* and *Florence* $1\frac{1}{2}$ Brace, *Lisbon* $\frac{82}{100}$ of a Vares, in *Sicily* $\frac{47}{100}$ of a Cane, *Madera* $\frac{82}{100}$ of a Brace.

Z

Zacca.] The Mint at *Venice*.

Zachine.] A Gold Coin worth about 7 s. 6 d. Sterling.

Zelos.] Money at *Constantinople*, about 2 s. 6 d. Sterling.

C H A P.

C H A P. XV.

Contains the Form of such Writings as are commonly used by Merchants and Traders.

I Have not inserted the following Presidents with design that the Merchant, &c. should be at the Trouble of Writing them over upon occasion, which would be too tedious, but chiefly that young Merchants and Traders by reading them, may be well acquainted with the Nature thereof, and may thereby know how to fill up Blank Bills of Lading, Policies of Insurance, Charter Parties, &c. tho' there are some others of which there are no Blanks ready Printed, as Bills of Exchange, Notes, Invoyses, Letters of Credit, Letters of License, &c. which they that have Occasion must write over, and for their Service a Form or Method may not be useless, especially to such as have not seen much of the Affairs of the World; and for these Reasons I have in Alphabetical Order, given an Example of all the most material Writing subservient to Trade that I could think of.

§. I. *An Arbitration Bond, with a Condition thereto annex'd.*

This Instrument is very useful among Merchants, who upon any slight occasion do not usually go to Law, but refer the Matter to be decided by two knowing Men; or if they two cannot agree, it is often determined by an Umpire, or one Man, chosen indifferently by both Parties; to stand to whose Award, final Determination, or Umpirage, the disagreeing Parties commonly give each other mutual Bonds.

In this Form.

Note, That the words variable, I have included in a Parathesis, between 2 Cro. chets, thus []

Noverint universi per presentes [me Benjaminum Bidfare de London in Com. Middlesex, Mercator.] Tenueri & firmiter Obligari [Willielmo Wellmeant de London predic' Mercator,] in Centum Libris bonæ & legalis monete Angliæ solvend' eidem [Willielmo Wellmeant] aut suo certo Atornat. Executor. vel Administrator. suis: Ad quam quidem

Presidents of Merchants Writings.

dem solutionem bene & fideliter faciend. Obligo me, Hæredes, Executores & Administratores meos firmiter per præsentem sigillo meo sigillat. dat. [primo die Maii Anno Regni Dom. noſt. Willielmi Tertii, Dei gratia Angliæ, Scotiæ, Franciæ & Hiberniæ Regis, fidei Defenſoris, &c. Nono Annoque Dom. 1704.]

The Condition of this Obligation is ſuch, That if the above-bounden [*Benjamin Bidfare* of London Merchant, his Heirs, Executors, and Administrators for his and their Parts and Behalſs, do in all things well and truly ſtand to, obey, abide by, perform, fulfill, and keep the Award, Order, Arbitrament, final End and Determination of (*Anthony Aimwell* and *Michael Makepeace* of London, Merchants) Arbitrators indifferently named, elected and choſen, as well on the part and behalf of the abovebounden [*Benjamin Bidfare*] as of the abovenamed [*William Wellmeant*] to arbitrate, award, order, judge and determine of and concerning all, and all manner of Actions and Actions, Cauſe and Cauſes of Actions, Suits, Bills, Bonds, Specialties, Judgments, Executions, Extents, Quarrels, Controverſies, Treaſſes, Damages and Demands whatſoever, at any time or times heretofore had, made, moved, brought, commenced, ſued, proſecuted, done, ſuffered, committed or depending by or between the ſaid Parties, ſo as the ſaid Award be made [and given up in Writing under their Hands and Seals ready to be delivered to the ſaid Parties] on or before the [Fourth Day of *June* next enſuing the Date abovementioned.] But if the ſaid Arbitrators do not make ſuch their Award of and concerning the Premiſes by the time aforeſaid; That then, if the ſaid [*Benjamin Bidfare*] his Heirs, Executors and Administrators, for his and their part and behalf, do in all things well and truly ſtand to, obey, abide, perform, fulfill and keep the Award, Order, Arbitrament, Umpirage, Final End and Determination of [*Ferdinando Finiſhall* of London Eſquire, Umpire indifferently choſen] between the ſaid Parties of and concerning the Premiſes, ſo as the ſaid Umpire do make his Award or Umpirage of and concerning the Premiſes, and deliver the ſame in Writing under his Hand and Seal to the ſaid Parties on or before the [fourteenth Day of *June* next enſuing the Date above-

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above-said.] Then this Obligation to be void, or else to remain in full Force, Strength and Virtue.

*Scaled and Delivered
(being stamp'd according
to Act of Parliament)
in the presence of*

A. B.
C. D.

Benjamin Bidsare.

But note, that if there is to be no Umpire you must omit the latter End, from [But if the said Arbitrators, &c.]

§. 2. A Bill of Debt.

Know all Men by these Presents, That I *Nicholas Needem* of London, Draper, do owe and am indebted unto *Christopher Creditmuch* of London, Merchant, the Sum of Eight hundred fifty two pounds of lawful *English* Coin, which said Sum I promise to pay unto the said *Christopher Creditmuch*, his Executors, Administrators or Assigns, on or before the Twenty Fourth Day of *June* next ensuing the Date hereof. Witness my Hand and Seal the First Day of *January*, 1706.

*Scaled and Delivered
in the presence of
Barthol. Bookall.
Peter Pettycash.*

Nich. Needem.

But if the Bill of Debt is for Money borrowed it may run thus :

REceived and Borrowed of *Christopher Creditmuch* of London Merchant, Eight hundred fifty two Pounds, which I do hereby promise to pay at Demand ; Witness my Hand, *June* 1. 1704.

852 l. 00 : 00

Nich. Needem.

§. 4. *An Inland Bill of Exchange.*

Norwich, June 1. 1704.

AT four Days sight pay unto Mr. Miles Moneylove, or his Order, One hundred thirty two pounds, value received of Edmund Easte, and place it to Account as per Advice of

To Mr. Paul Punctual
at the Ship in Grace-
Church street, London.

Your humble Servant

David Draw-well,

§. 4. *A Foreign Bill.*London. April 10, 1706. for 1000 ps. 8, at $53\frac{3}{4}$ d. Sterl. per ps. $\frac{1}{4}$.

AT Three Usance pay this my first Bill of Exchange unto Mr. Peter Peterary, or his Order, One thousand pieces of Eight, Mexico Exchange, at 53 pence $\frac{1}{2}$ Sterling per piece of Eight, for the Value receiv'd of Andreas Amanretia, and pass it to Account, as per Advice of

To Mr. Peter Paygood
Merchant in Leghorn.

Your Real Friend, —

(Vide Ch. II. §. 1.)

Edm. English

§. 5. *The Form of a Bill of Lading.*

(Note, that the Words between [] are Blanks filled up.)

SHipped by the Grace of God in good order and well conditioned by [Francis Freightwell of London, Merchant, and Company] in and upon the good Ship called [the Straights-Merchant of Dover] whereof is Master under God, for this present Voyage, [Samuel Sailtrve of London] Mariner, and now riding at Anchor [in the Port of London,] and by God's Grace bound for Leghorn in Italy; to say, [One Bale of Woollen-Cloth, one Cask of Tinn in Blocks, and one Cask of Refined Sugar; Contents, &c. as per Invoice] being marked and numbered as in the Margent, and are to be delivered in the like good order and well conditioned at the aforesaid Port of [Leghorn] (the Danger of the Sea only excepted) unto Mr. David Dealfair Merchant there.] or to his Assigns, he or they paying Freight for the said Goods,

N^o 1, 2, 3.

[two

§. 7. *The Form of a Bill of Entry at the Custom-house.*

June 1. 1704.

IN the *Straights-Morebant*, Sum. *Sailrus* for *Leghorn*.

Francis Fraightwell.

Nine short Cloths.
Fourteen Hundred Three Quarters of *Tim*.
Six Hundred One Quarter and Twenty four Pound
Double Refined *Sugar*.

§. 8. *A Form of a Bill of Sale.*

The most usual Bill of Sale among Traders is, when a Person wanting a Sum of Money, deposits Goods as a Security to the Lender, which Goods, in Case the Sum borrowed is not repaid with Interest at a Time prefix'd, are forfeited to the Creditor.

It runs thus:

Know all Persons whom it may Concern, That I *Lazarus Lackcash* of *Norwich* in the County of *Norfolk* Goldsmith, for and in Consideration of Fifty Pounds of Lawful Money of *England* to me in Hand, paid by *Dives Doubledun* of *London* Esquire, the Receipt whereof I do hereby acknowledge, have bargain'd, sold and delivered, and by these presents, according to the due Form of Law, do Bargain, Sell, and Deliver unto the said *Dives Doubledun* four Caracts of Oriental Pearl, Nine Grains of brait Diamonds, one Silver Tea Pot weight 20 Ounces, one Silver Salver weight 10 Ounces, two Sets of Silver Casters weight 30 Ounces, and ten *Cornelian Rings*, Sealed up by Consent with my Seal, To have and to hold the said bargained Premises unto the said *Dives Doubledun*, his Executors Administrators, and Assigns for ever. And I the said *Lazarus Lackcash*, for my self, my Executors and Administrators, the said bargain'd Premises unto the said *Dives Doubledun*, his Executors, Administrators and Assigns against all Persons, shall and will warrant and for ever defend by these Presents, *Provided* nevertheless,
That

That if I the said *Lazarus Lackcash*, my Executors, Administrators and Assigns, or any of us, do and shall well and truly pay or cause to be paid unto the said *Dives Doubledun*, his Executors, Administrators or Assigns, the Sum of Fifty Pounds Principal, and thirty Shillings, half a Years Interest thereof, on the first Day of *November* next ensuing the Date hereof, for Redemption of the said bargained Premises; Then this present Bill of Sale shall be void, or else to remain in full force: In *Witness* whereof I have hereunto set my Hand and Seal the first Day of *May*, *Anno Dom.* 1706. And in the Fifth Year of the Reign of our Sovereign Lady *Ann* Queen of *England*.

Sealed and Delivered, &c.

A. B.

C. D.

Lazarus Lackcash.

§. 9. *A Form of a Charter-party of Affraightment.*

What a Charter-party is you will find in the Dictionary and elsewhere, which will also appear very plain in this following Form, to be given to the Merchant by the Master, and the like by the Master to the Merchant mutually Sign'd, &c.

THIS Charter-party of Affraightment indented, made and agreed upon the Twenty first Day of *April*, *An Dom.* 1706. and in the Fifth Year of the Reign of our Sovereign Lady *Ann* Queen of *England*, &c. Between *Herbert Haulaway* of *Deptford* Mariner, Master (under God) of the Good Ship or Vessel called the *Fortunate*, of the Burthen of Three Hundred Tuns or thereabouts, now riding at Anchor in the Port of *Plymouth* of the one part, and *Giles Growrich* of *Portsmouth* in the County of *Hants*, Merchant, of the other part, Witneffeth, That the said Master hath granted and lett to Freight the said Vessel unto the said Merchant; and the said Merchant hath hired the said Vessel for a Voyage with her to be made in manner and form following; That is to say, The said *Herbert Haulaway* for himself, his Executors and Administrators doth Covenant, Promise and Grant to and with the said *Giles Growrich*, his Executors and Administrators by these Presents, That the said Vessel with the first fair Wind that God shall send after the Twentieth Day of *May* next ensuing the Date above, shall depart from the said Port of *Plymouth* with such lawful Goods and Merchandizes as
it

it shall please the said *Giles Growrich* or his Assigns in the mean time to Lade on board her: And that it shall be lawful to and for the said *Giles Growrich*, his Factors and Assigns in the mean time to Lade aboard her all such lawful Goods and Merchandizes as he or they shall think fit, which she may reasonably carry over and above her Victuals, Tackle and Apparel. And that the said Vessel shall, by God's Grace, directly, as Wind and Weather will serve, Sail unto the Port or Harbour of *Aleppo* in *Turky*, and there deliver unto the said *Giles Growrich*, his Executors, Administrators, Factors and Assigns, all such Goods and Merchandizes as shall be Laden on Board of her by the said *Giles Growrich*, his Executors, Administrators, Factors or Assigns, dry and well condition'd, Danger of the Sea, Fire, Enemies, and Embargo of Princes only excepted. And after her clearing and right discharge of such Goods as she shall receive into her within the said Port of *Plymouth*, shall receive in the said Port of *Aleppo* her full Lading in such Lawful Goods and Merchandizes as it shall please the said *Giles Growrich*, his Executors, Administrators, Factors or Assigns, to Lade or cause to be Laden aboard her; and after such her full Lading at the Port of *Aleppo* aforesaid, shall directly sail as Wind and Weather will permit to the said Port or Harbour of *Plymouth* aforesaid, and there deliver to the said *Giles Growrich*, his Executors, Administrators, Factors or Assigns, within the space of ten Working Days hereafter mentioned, the said Goods and Merchandizes so received into her at *Aleppo* aforesaid, dry and well conditioned, and make a right Discharge and End of the said Voyage, the Danger of the Sea, Fire, Enemies, and Embargo of Princes and Rulers only excepted: And that the said Vessel, after her Arrival at *Aleppo* aforesaid, shall stay at Anchor there for her Unlading and Relading fifty Working Days, and shall stay at Anchor at the said Port of *Plymouth*, after her Return again and Arrival there from *Aleppo* aforesaid, ten Working Days, for the Delivery of the said Goods so to be Laden aboard her at *Aleppo* aforesaid; and the said *Giles Growrich*, for himself, his Executors and Administrators, doth farther Covenant, Promise, and Grant to and with the said *Herbert Haulaway*, his Executors and Administrators, and also warrant by these Presents, the said Vessel at her Departure from the said Port of *Plymouth*, and during the said Voyage, shall be strong and staunch, and sufficiently Victualled, Tackled and Apparelled

relled; and furnished with Masts, Sails, Sail-Yards, Anchors, Cables, Ropes, Cords, Tackle, Apparel, Boat, and all other Furniture whatsoever requisite or needful for such a Vessel for such a Voyage. And the said *Giles Growrich*, for himself, his Executors and Administrators, doth Covenant and Grant to and with the said *Herbert Haulaway*, his Executors and Administrators, not only to Unlade and Relade and dispatch away the said Vessel at and from *Aleppo* and *Plymouth* aforesaid, within the time and times before therefore limited and agreed upon, but also for the Freight or Hire of the said Ship or Vessel for all the said Voyage, *viz.* from *Blymouth* to *Aleppo* and from thence to *Plymouth*, well and truly pay or cause to be paid unto the said *Herbert Haulaway*, his Executors, Administrators or Assigns, the Sum of Three hundred and fifty Pounds of lawful *English* Coin in manner and form following, that is to say, The Sum of 58 pounds at the said Port of *Aleppo* within twenty Days next after the Arrival of the said Ship or Vessel and Delivery of the said Goods well conditioned at *Aleppo* aforesaid, and two hundred ninety two pounds more, Residue of the said three hundred and fifty pounds at *Plymouth* aforesaid, within ten Working Days after the return again and arrival of the said Ship or Vessel from *Aleppo* to *Plymouth*, and the Delivery of the said Goods to be received into her at *Aleppo* aforesaid, unto the said *Giles Growrich*, his Executors, Administrators, Factors or Assigns at *Plymouth* aforesaid, well conditioned as aforesaid; together with Primage and Average, according to the Use and Custom of Merchants. And the said *Giles Growrich*, for himself, his Heirs, Executors, and Administrators, doth Covenant and Grant to and with the said *Herbert Haulaway*, his Executors and Administrators by these Presents, that in Case the said Vessel shall through the default of the said *Giles Growrich*, his Factors or Assigns, stay for her Unlading or Relading at *Aleppo* aforesaid, or for her Lading at *Plymouth* aforesaid, before her Departure from thence; or for her Unlading at *Plymouth* aforesaid, and after her return and arrival from *Aleppo* aforesaid to *Plymouth* aforesaid, after the several Days therefore abovementioned, That then the said *Giles Growrich*, his Executors or Administrators shall and will pay or cause to be paid unto the said *Herbert Haulaway*, his Executors or Administrators the Sum of Thirty Shillings Sterling for every Working Day that the said Vessel shall either stay at *Aleppo* for her Unlading and Relading, or at *Plymouth* aforesaid, for

for her Lading or Unlading after the Days above limited and agreed upon; and to the performance of all and singular the Covenants and Agreements abovementioned, which on the part and behalf of the said *Herbert Haulway*, his Executors or Administrators, are to be performed in all things as abovesaid, the said *Herbert Haulway* bindeth himself, his Executors and Administrators, and especially the Ship or Vessel aforesaid, with her Freight, unto the said *Giles Growrich*, his Executors and Administrators in the Sum or Penalty of Four Hundred Pounds of Lawful Money of *England*, well and truly to be paid by these Presents; and likewise for the Performance of all and singular the Covenants and Agreements abovementioned, which on the part and behalf of the said *Giles Growrich*, his Executors, Administrators, are and ought to be performed in all things as are above recited, the said *Giles Growrich* bindeth himself, his Executors and Administrators and Goods, unto the said *Herbert Haulway*, his Executors and Administrators, in the Sum or Penalty of Four Hundred Pounds of like Money of *England*, well and truly to be paid by these Presents. In *Witness* whereof, the Parties first abovenamed to these Charter-parties Indented, interchangeably have set their Hands and Seals; the Day and Year first above-written.

Scaled and Delivered, &c.

Herbert Haulway.



S. 10. *The Form of a General Release.*

KNOW all Men by these Presents, That I *Henry Haveall* of *London* Merchant, have Remised, Released, and for ever quit Claim, and by these Presents do for me, my Heirs, Executors and Administrators, Remise, Release, and for ever quit Claim unto *Lewis Lightpocket*, Citizen and Larimer of *London*, his Heirs, Executors and Administrators, all and all manner of Actions, Cause and Causes of Action, Suits, Bills, Bonds, Writings, Obligations, Debrs, Dues, Duties, Accounts, Sum and Sums of Money, Judgments, Executions, Extents, Quarrels, Controversies, Trespases, Damages and Demands whatsoever, both in Law and Equity, or otherwise howsoever, which against the said *Lewis Lightpocket* I ever had, now have,

and which I, my Heirs, Executors and Administrators shall or may have, claim, challenge or demand, for or by reason or means of any Matter, Cause or Thing, from the Beginning of the World to the Day of the Date of these Presents: In Witness whereof I have hereunto set my Hand and Seal the Tenth Day of April, Anno Dom. 1706.

*Scaled and Delivered
in the Presence of
Simon Saywell
Lawr. Lackwitt.*

Henry Haveall.

§. II. *The Form of an Invoice or Factory.*

INvoyce (or Factory) of 6 Hogsheds of Tobacco, 12 Barrels of Orgall, 5 Baggs of Shomack, 3 Chests of Sugar, and 3 Bales of Woollen-Cloth, Shipt on Board the *Streights-Merchant*, *Theophilus Througbaste* Master, for the proper Account and Risque of *Marmaduke Moridani*, Merchant in *Legborn*, and consign'd to himself, being mark'd and number'd as *per Margent*; Contents, Costs and Charges, as follows.

Best

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Best bright Tobacco 6 Hogheads, viz.

	<i>C. Q. lb.</i>	<i>C. Q. lb.</i>	<i>C. Q. lb.</i>	
N ^o . 1 qt.	2 : 3 : 07	Tare 0 : 2 : 14	N ^o . 4	4 : 1 : 27 Tare 0 : 3 : 04
2	3 : 1 : 10	Tare 0 : 2 : 20	5	2 : 2 : 20 Tare 0 : 2 : 10
3	3 : 3 : 00	Tare 0 : 2 : 00	6	5 : 2 : 10 Tare 0 : 3 : 12



Gross 9 : 3 : 17,	1 : 3 : 06 Tare	12 : 3 : 01	Gross 2 : 0 : 26 Tare.
Gross 12 : 3 : 01			1 : 3 : 06 Tare.

22 : 2 : 18 Total Gross.
4 : 0 : 04 Tare

4 : 0 : 04 Tot. Tare.

18 : 2 : 14 Suttle, 2086 lb.
Tret, 80 lb.

l. s. d.

Nett, 2006 lb. at 7½ *d.* per pound — 62 : 13 : 09

Orchal, viz.

N^o. 7. to 18 qt. 12 Barrels at 14 *s.* per Barrel — 08 : 08 : 00

Shomack 5 Baggs, viz.

N^o. 19 qt. Nett. *C.* 2 : 2 : 07. N^o. 22 3 : 0 : 06

20 2 : 0 : 24 23 2 : 1 : 20

21 1 : 3 : 17

5 : 1 : 26

6 : 2 : 20

5 : 1 : 26

In all 12 : 0 : 18 at 12 *s.* per Hundred 07 : 05 : 12

Sugar Double Refin'd 3 Chests, viz.

N^o 24 381 lb.

25 505 lb.

26 326 lb.

1212 Nett at 18 *d.* per pound — 90 : 18 : 00

Cloth 3 Bales, viz.

N^o. 27, 28, 29 qt. each (with Wrappers) 10 short } 360 : 00 : 00

Cloths at 12 *l.* per Cloth

l. s. d.

529 : 05 : 08

Charges, viz.

To Custom of all — 053 : 19 : 09½

To Cost of 3 Chests for the Sugar — 000 : 18 : 00

Ditto of 3 Wrappers for the Cloth — 000 : 07 : 00

Brokage at ½ per Cent. — 002 : 12 : 10½

Storage — 001 : 00 : 00

Cartage and Portorage — 000 : 10 : 06

588 : 13 : 10.

To my Commission at 2½ per Cent. — 014 : 14 : 04

Law Deo, London May 4. 1706. Errors excepted per Timor by Trusty.

§. 12. *The Form of a Letter of Credit.*

The Forms of Letters of Credit may be various and yet valid and authentick, one of which may serve, if it be of this Nature, to be altered according to the Circumstances of the Correspondents. (*Vide* the Dictionary) Example.

S I R,

THE last of Yours which I received, was dated the 24 *ultimo*, by which I understand you have mine of the 20 *Ditto*, and I hope by this time you have accomplish'd the Affair therein mentioned; as to the Purport of Yours, assure your self, it shall be punctually observed, of which more *per* next; in the *interim* I intreat you to furnish the Bearer hereof, Mr. *Matthew Meanwell*, with the Sum of Fifty Six Pounds Sterling, at such time as he shall require the same, and place it to my Account, for which this my Letter of Credit, together with his Receipt, shall be your sufficient Voucher and Warrant, giving, (upon Payment) a Line or two of Advice to

To Mr. Nicholas Neverfail
Merchant in Hull.
London, May 1. 1706.

Your real Friend and Servant,
Samuel Standfast.

§. 13. *The Form of a Letter of License.*

TO all People to whom this present Writing shall come, We whose Names are underwritten, Creditors of *Oliver Overshot* of *London Haberdasher*, send Greeting: Whereas the said *Oliver Overshot* at this present time doth stand indebted and justly oweth unto us, the said Creditors of him the said *Oliver Overshot*, divers and sundry Sums of Money, which by reason of many Debts (and some of them very great) that are likewise justly owing to him the said *Oliver Overshot*, and cannot be recovered without some time of Respite, he is very much disabled

at present to make payment unto his said Creditors our whole and just Debt, as he seemeth willing and desirous: In consideration whereof he instantly desireth us, That we the said Creditors, and every of us, would be pleased to give and grant unto him the said *Oliver Overshot*, his Executors, Administrators or Assigns, such Liberty and Respite of Time for the payment and Satisfaction of our several Debts as he thinketh reasonable for the obtaining, getting and recovering of his said Debts; that is to say, That we and every of us would be content to take and accept of our whole Debts in the space of two full Years next after the Date hereof, to be divided into two equal parts, to be paid at two several Payments, in Manner and Form following, *viz.* The first Payment thereof to be made on the first Day of *May* next ensuing the Date hereof, which shall be in the Year of our Lord 1705. And the other Payment or Moiety, the Residue thereof, to be paid on the first Day of *May*, which shall be in the Year of our Lord 1706. in full Payment and Satisfaction of the said several Debts. And for the more full Performance of the said several Payments in such manner and form as is above limited and declared, according to the true meaning of these Presents, he the said *Oliver Overshot* shall or will at or before the Tenth Day of this Instant *May*, become bound unto us the Creditors respectively by one Obligation in due Form of Law to be made, including all and every the Payments in such sort as is above expressed, and the Penalty of every Obligation to be double the whole Sum, included in the Condition of the same, to be delivered to us, and every of us, our Executors or Assigns, at or before the said Tenth Day of *May* next ensuing the Date hereof: *Know ye therefore,* That we the said Creditors whose Names are subscribed, and every of us for his own part, and for his Executors, Administrators and Assigns, for the Consideration abovementioned, do by these Presents willingly consent, promise, covenant and agree to and with the said *Oliver Overshot*, his Executors, Administrators and Assigns, by these Presents, that we the said Creditors, and every of us, our Executors, Administrators and Assigns, shall and will accept of the said *Oliver Overshot*, his Executors, Administrators and Assigns, all and every the said Debts and Sums of Money by the said *Oliver Overshot* unto us and every of us owing and payable upon such Obligations,

Professors of Merchants Writings.

in London. And so we the Assurers are contented, and do hereby promise and bind our selves, each one for his own part, our Heirs, Executors and Goods to the Assureds, their Executors, Administrators and Assigns, for the true performance of the Premises, confessing our selves paid the Consideration due unto us for this Assurance by the said *William Wise*, after the Rate of Eight Pounds Sterling, *per Cent.* warranted to depart with Convoy.

In Witness thereof we the Assurers have subscribed our Names and Sums Insured in London, Dated the First Day of *May*, 1706.

Memorandum, The Assurers do hereby Covenant, Promise and Oblige themselves, their Heirs, Executors and Goods, in Case of Loss happening (which God forbid) to satisfy and pay their several Sums of Money herein assured upon the Abatement only of 10 Pounds *per Cent.* and no more; Provided always that they pay their respective Sums of Money by them assured according to Subscription, within one Month after Notice thereof, otherwise no Abatement whatsoever to be made, but to pay their full Sums according to each Man's Subscription, any Use or Custom to the contrary notwithstanding. Written the Day abovesaid.

I (*A. B.*) am contented with this Insurance for One hundred and fifty pounds; Witness my Hand, *London*, *Anno Dom.* 1706. } 150

A. B.

I (*C. D.*) am contented with this Insurance for One hundred Pounds; Witness my Hand, *London*, *Anno Dom.* 1706. } 100

C. D.

I (*E. F.*) am contented with this Insurance for One hundred and fifty pounds; Witness my Hand, *London*, *Anno Dom.* 1706. } 150

E. F.

§. 16. *Protest of a Foreign Bill.*

K NOW all Persons whom this present Writing may concern, That the Second Day of *April*, 1706. at the Request of Mr. *Richard Rich* of *London* Merchant, I *Isaac Sharp* Publick Notary, Sworn and admitted by Authority of her Sacred Majesty *Ann* Queen of *England*, &c. did go to the Dwelling-House of Mr. *Paul Puttoff*, upon whom the abovenamed Bill of Exchange is drawn, and shewed the Original unto the said Mr. *Paul Puttoff*, demanding his Acceptance of the same, who answered me, he would not accept the said Bill for Reasons best known to himself, of which he should inform the Drawer Mr. *Frederick Farfetch*. Wherefore I the said Notary did Protest, and by these Presents do Protest as Well against the said *Frederick Farfetch*, as against the said *Paul Puttoff*, as also against all other Persons, Endorsers, and others therein concerned, for all Changes, Rechanges, Charges, Damages and Interest whatsoever. In presence of *A. B.* and *C. D.* called for Witnesses to this present Act done in my Office in *London* the Day and Year abovesaid.

Isaac Sharp, Publick Notary.

Note, That this Protest is always inserted or written under a Copy of the Bill *Vide* Chap. 11. §. 1.

§. 17. *The Forms of Receipts.*

If the Receipt be giving in a Book, you need not mention the Man's Name of whom you receive, because that is always imply'd, the Book being his: Thus (if the Receipt be for Goods formerly sold.)

Receiv'd *April* the 1st. 1706. Forty eight Pounds }
 Seven Shillings and Four Pence, in full Pay- } 48:07:04
 ment _____

Daniel Dunwell.

If a Receipt be given upon some other Account, to one that keeps no Book for Receipts, by one for Account of another, it will run thus;

June 1. 1706.

Receiv'd of Mr. *Andrew Allpaid*, by Order and for }
 Account of Mr. *Humphrey Hoardnone*, One hun- } 100:00:00
 dred Pound; I say receiv'd as aforesaid _____ }
 per *Tho. Trusty*.

A Rent-Gatherer's Receipt.

Receiv'd *April* the 6th, 1706. of Mr. *Lewis Land-*
love Twenty five Pounds, in full for half a Year's }
 Rent due at *Christmas* Day last, out of which de- }
 ducted for Taxes five Pounds, and for Repairs two } 25:00:00
 Pounds: I say receiv'd for the Use of *Robert Richer*,
 Esquire, by Virtue of his Letter of Attorney _____ }
 By me *Christopher Countwell*.

A Receipt on the Backside of a Bill of Exchange.

Admit *Tertullian Trewardo* receives in *Leghorn* the Contents of the Bill mentioned in the 4th Sect. of this Chapter, Mr. *Peter Peterani* first writes his Name on the Backside, which is his Order, leaving room to write a Receipt over it, then the Receipt on the Backside stands thus;

June

June 24th, 1706. Received the full Contents }
within mentioned, being one thousand Pic- } Ps. $\frac{2}{3}$ 1000.
ces of Eight _____ }

Peter Peterani.
Witness, *Tertul. Trevardo.*

§. 18. *The Form of the Condition of a Broker's Bond to the Lord Mayor and Court of Aldermen of London, according to 8 and 9 W. 3.*

THE Condition of this Obligation is such, That whereas *Ben. Fox* is sworn and admitted a Broker, pursuant to a Statute in the behalf lately made. Now therefore if the said *Ben. Fox* do and shall well and truly Use, Execute and Perform the Office and Employment of a Broker between Party and Party, without Fraud, Covin, or any corrupt or crafty Devices, according to the Purport, true Intent and Meaning of the Statute in that Case lately made and provided; then this Obligation to be void, or else to remain in full Force and Virtue.

§. 19. *The Form of an Umpirage.*

The Umpire chosen as mentioned in Sect the 1st of this Chapter making his Umpirage, it will stand thus.

TO all People to whom this present Writing shall come, *I Ferdinando Finisball* of London, Esquire, Umpire indifferently chosen by *Benjamin Bidfare* and *William Wellmeant* of London, Merchants, having deliberately heard and understood the Grievs, Allegations and Proofs of both the said Parties, and willingly, as much as in me lieth, to set the said Parties at Unity and good Accord, do by these Presents Arbitrate, Award, Order, Deem, Decree and Judge, That the said *Benjamin Bidfare*, his Executors and Assigns, shall well and truly pay or cause to be paid unto the said *William Wellmeant*, his Executors, Admi-

Administrators or Assigns, the full Sum of Thirty five Pounds of lawful Money of *England*, on the Twenty ninth Day of *Sept.* 1697. and that upon Payment thereof the said *B. Bidfore* and *W. Wellmeant* shall Seal, Subscribe, and as their severa Acts and Deeds deliver each to the other a general Release in Writing of all Matters, Actions, Suits, Causes of Actions, Bonds, Bills, Covenants, Controversies and Demands whatsoever, which either of them hath, may, might, or in any wise ought to have of and against each the other of them by reason aforesaid, or means of any Matter, Cause or Thing whatsoever, from the Beginning of the World to the first Day of *May* now last past, and in the Tenth Year of the Reign of our Sovereign Lord *W.* the Third King of *England, &c.* In Witness whereof I have hereunto set my Hand and Seal the 14th Day of *Feb.* in the Year of our Lord God, 1700. (*Vide Statute 9, 10, W. 3.*)

*Sealed and Delivered
in the presence of
Bryan Butler.
Cha. Cook.*

Ferdinando Finisball. ©

F I N I S.

Advertisement.

AN *Index to Interest*: The most compleat Treatise of that Subject Extant. Written by the Author of this Book; and Sold by *Chr. Coningsby* and *D. Midwinter* aforesaid. *Note*, That there never was any Tables of *Simple Interest* that shewed the same for 365 Days at more than one Rate: Whereas this Book hath the Interest for 4 Rates, and each extends to 365 Days, and thence annually to 20 Years: And by these the Interest at 10 Rates is easily found, all in Vulgar Numbers. Besides, here you have a Table for the Valuation of Church or College Leases; also how to value 1, 2 and 3 Lives: And a Circle for finding the Days between any 2 in the Year, which are all New, and were never before Published. Very Usefull for Gentlemen, Merchants, &c. *Note*, the Tables are most easy to be understood, being done in plain Pounds, Shillings, Pence and Farthings.

